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A Study of K-12 Teachers in Small School Districts : Their Levels of Stress, the Source of Stress, and the Effect of Initiating Coping Strategies

Roberta J. Farwell
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Andrews University

School of Education

A STUDY OF K-12 TEACHERS IN SMALL SCHOOL DISTRICTS: THEIR LEVELS OF STRESS, THE SOURCE OF STRESS, AND THE EFFECT OF INITIATING COPING STRATEGIES

A Dissertation

Presented in Partial Fulfillment

of the Requirements for the Degree

Doctor of Philosophy

by

Roberta J. Farwell

June 1999

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ABSTRACT

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ABSTRACT OF GRADUATE STUDENT RESEARCH

Dissertation

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Title: A STUDY OF K-12 TEACHERS IN SMALL SCHOOL DISTRICTS: THEIR LEVELS OF STRESS, THE SOURCE OF STRESS, AND THE EFFECT OF INITIATING COPING STRATEGIES

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Date completed: June 1999

Problem

This study explored the relationship between K-12 regular education teachers in school districts with fewer than 2,500 students and their levels of stress as it related to the sources of stress, demographic variables, and initiation of coping strategies.

Method

The subjects of this study were 329 K-12 teachers. They completed the Maslach Burnout Inventory, Education form, a demographic/coping mechanism form, and Stressor Source Check List.

Results

1. Classroom, building, and community issues affected teachers' attitudes toward their profession: Stress levels, as measured by the MBI, were reflected in their identification of sources of stress in the work environment.

2. A teacher's gender was related to the risk of burnout: Female teachers were less likely to experience burnout than were male teachers.

3. A teacher's marital status was related to the risk of burnout: Both divorced and widowed teachers were less likely to approach levels of burnout than married or single teachers.

4. A teacher's teaching assignment was related to the risk of burnout: Elementary teachers were less likely to experience burnout than were high-school teachers, and junior-high/middle-school teachers were more likely to experience burnout than either of the other two groups.

5. A teacher's years of experience were related to the risk of burnout: Teachers with 6-15 and 16-25 years of teaching experience were less likely to experience burnout than were teachers with 0-5 and 26-plus years of teaching experience.

Conclusions

A small school district effect is suggested by the following deviation from literature citations:

1. The subjects in this study placed less significance on stressor issues related to building concerns.

2. Gender- and stress-related findings suggest an effect related to the sense of belonging associated with working in a small community.

3. A stress pattern related to years of teaching experience was found.

Dedication

This work is dedicated to all the Andrews University professors and staff members who gave so generously of their time, efforts, and talents to the end that this degree became a reality.

One looks back with appreciation to the brilliant teachers, but with gratitude to those who touched our human feelings. The curriculum is so much necessary raw material, but warmth is a vital element for the growing plant and for the soul of the student.

Carl Jung

And to family, friends, and colleagues without whose love, support, and concern this journey would not have been possible. You have demonstrated that . . .

We cannot live only for ourselves. A thousand fibers connect us with our fellow-men; and along those fibers, as sympathetic threads, our actions run as causes, and they come back to us as effects.

Herman Melville

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CHAPTER I

INTRODUCTION

Background

The term burnout first appeared in research literature in the mid-1970s. Fruedenberger (1974) defined burnout as the inability to function effectively in one's job as a consequence of prolonged and extensive job-related stress.

Stress, when linked to burnout, is viewed from a negative perspective. However stress is a vital part of the human existence. Selye (1978) defined stress as "the nonspecific response of the body to any demand" (p. 74). Humans, in the natural course of life, experience both eustress (good stress) and distress (bad stress). It is the natural inclination of humans to enjoy the eustress, but coping skills need to be developed to keep distress in a healthy balance.

Burnout is associated with individuals who work in helping professions. Maslach (1976) found that workers experiencing burnout "lose all concern, all emotional feeling, for the persons they work with and come to treat them in detached or even dehumanized ways" (p. 16). Numerous researchers, many of whom drew their populations from large city and suburban school districts, have studied the effects of high levels of stress on teachers and the resulting potential for burnout (Dworkin, 1987;

Farber, 1983; Feitler & Tokar, 1982; Schonfeld, 1990; Schwab & Iwanicki, 1982; Schwab, Jackson, & Schuler, 1986). Common stressors found in the teaching profession have been identified and recommendations have been made for adjustments in the structure of the functioning of schools, which it is believed would alleviate some of the stress teachers experience.

Statement of the Problem

The degree to which teachers are self-assessing their stress levels and consciously making an effort to alleviate their experience of stress has not been explored. This study examined the levels of burnout found in mainstream classroom teachers in public schools in small school districts and the relationship of the degree of stress and the origin of the stress–Is it classroom, building, or community related? In addition, this study investigated teachers' efforts to cope with stress and the strategies that they have initiated themselves when they feel stressed. Subgroupings of the participants were based on factors of gender, parenting experience, age, marital status, grade level taught, and years of experience.

The Purpose of the Study

The purpose of the study was to address the following questions:

1. Is the source of the stressor–classroom, building, or community–a factor in the level of burnout experienced?

2. Is a teacher's gender related to the level of burnout experienced?

3. Is a teacher's parenting experience related to the level of burnout experienced?

4. Is a teacher's marital status related to the level of burnout experienced?

5. Is a teacher's age related to the level of burnout experienced?

6. Is a teacher's teaching assignment–elementary, junior-high /middle-school, or senior-high-school–related to the level of burnout experienced?

7. Is a teacher's years of experience related to the level of burnout experienced?

8. Do teachers who employ coping strategies have reduced stress levels?

Hypotheses

The following experimental hypotheses were formulated for investigation:

Hypothesis 1. There is a significant correlation between scores on the Emotional Exhaustion subscale of the Maslach Burnout Inventory (MBI) and scores on the Stressor Source Check List (SSCL) related to classroom issues.

Hypothesis 2. There is a significant correlation between scores on the Depersonalization subscale of the MBI and scores on the SSCL related to classroom issues.

Hypothesis 3. There is a significant correlation between scores on the Personal Accomplishment subscale of the MBI and scores on the SSCL related to classroom issues.

Hypothesis 4. There is a significant correlation between scores on the Emotional Exhaustion subscale of the MBI and scores on the SSCL related to building issues.

Hypothesis 5. There is a significant correlation between scores on the Depersonalization subscale of the MBI and scores on the SSCL related to building issues.

Hypothesis 6. There is a significant correlation between scores on the Personal Accomplishment subscale of the MBI and scores on the SSCL related to building issues.

Hypothesis 7. There is a significant correlation between scores on the Emotional Exhaustion subscale of the MBI and scores on the SSCL related to community issues.

Hypothesis 8. There is a significant correlation between scores on the Depersonalization subscale of the MBI and scores on the SSCL related to community issues.

Hypothesis 9. There is a significant correlation between scores on the Personal Accomplishment subscale of the MBI and scores on the SSCL related to community issues.

Hypothesis 10. There is a linear combination of the stress scores related to classroom, building, and community issues which yields a significant multiple correlation with the Emotional Exhaustion subscale of the MBI.

Hypothesis 11. There is a linear combination of the stress scores related to classroom, building, and community issues which yields a significant multiple correlation with the Depersonalization subscale of the MBI.

Hypothesis 12. There is a linear combination of the stress scores related to classroom, building, and community issues which yields a significant multiple correlation with the Personal Accomplishment subscale of the MBI.

Hypothesis 13. There is a significant difference in the degree of burnout, as measured by the Emotional Exhaustion subscale of the MBI, between male and female teachers.

Hypothesis 14. There is a significant difference in the degree of burnout, as measured by the Depersonalization subscale of the MBI, between male and female teachers.

Hypothesis 15. There is a significant difference in the degree of burnout, as measured by the Personal Accomplishment subscale of the MBI, between male and female teachers.

Hypothesis 16. There is a significant difference in the degree of burnout, as measured by the Emotional Exhaustion subscale of the MBI, between teachers who are parenting and teachers who are not.

Hypothesis 17. There is a significant difference in the degree of burnout, as measured by the Depersonalization subscale of the MBI, between teachers who are parenting and teachers who are not.

Hypothesis 18. There is a significant difference in the degree of burnout, as measured by the Personal Accomplishment subscale of the MBI, between teachers who are parenting and teachers who are not.

Hypothesis 19. There is a significant difference in the degree of burnout, as measured by the Emotional Exhaustion subscale of the MBI, between teachers who are married, single, separated/divorced, or widowed.

Hypothesis 20. There is a significant difference in the degree of burnout, as measured by the Depersonalization subscale of the MBI, between teachers who are married, single, separated/divorced, or widowed.

Hypothesis 21. There is a significant difference in the degree of burnout, as measured by the Personal Accomplishment subscale of the MBI, between teachers who are married, single, separated/divorced, or widowed.

Hypothesis 22. There is a significant difference in the degree of burnout, as measured by the Emotional Exhaustion subscale of the MBI, between teachers 21-30 years of age, teachers 31-40 years of age, teachers 41-50 years of age, and teachers 51-plus years of age.

Hypothesis 23. There is a significant difference in the degree of burnout, as measured by the Depersonalization subscale of the MBI, between teachers 21-30 years of age, teachers 31-40 years of age, teachers 41-50 years of age, and teachers 51-plus years of age.

Hypothesis 24. There is a significant difference in the degree of burnout, as measured by the Personal Accomplishment subscale of the MBI, between teachers 21-30

years of age, teachers 31-40 years of age, teachers 41-50 years of age, and teachers 51-plus years of age.

Hypothesis 25. There is a significant difference in the degree of burnout, as measured by the Emotional Exhaustion subscale of the MBI, between elementary teachers, junior-high/middle-school teachers, and senior-high-school teachers.

Hypothesis 26. There is a significant difference in the degree of burnout, as measured by the Depersonalization subscale of the MBI, between elementary teachers, junior-high/middle-school teachers, and senior-high-school teachers.

Hypothesis 27. There is a significant difference in the degree of burnout, as measured by the Personal Accomplishment subscale of the MBI, between elementary teachers, junior-high/middle-school teachers, and senior-high-school teachers.

Hypothesis 28. There is a significant difference in the degree of burnout, as measured by the Emotional Exhaustion subscale of the MBI, between teachers who have been teaching 0-5 years, 6-15 years, 16-25 years, and 26-plus years.

Hypothesis 29. There is a significant difference in the degree of burnout, as measured by the Depersonalization subscale of the MBI, between teachers who have been teaching 0-5 years, 6-15 years, 16-25 years, and 26-plus years.

Hypothesis 30. There is a significant difference in the degree of burnout, as measured by the Personal Accomplishment subscale of the MBI, between teachers who have been teaching 0-5 years, 6-15 years, 16-25 years, and 26-plus years.

Hypothesis 31. There is a significant difference in the degree of burnout, as measured by the Emotional Exhaustion subscale of the MBI, between teachers who actively initiate coping strategies to alleviate stress and teachers who do not.

Hypothesis 32. There is a significant difference in the degree of burnout, as measured by the Depersonalization subscale of the MBI, between teachers who actively initiate coping strategies to alleviate stress and teachers who do not.

Hypothesis 33. There is a significant difference in the degree of burnout, as measured by the Personal Accomplishment subscale of the MBI, between teachers who actively initiate coping strategies to alleviate stress and teachers who do not.

Hypothesis 34. There is a significant canonical correlation between a linear combination of the three stressors and a linear combination of the three MBI subscale scores.

Hypothesis 35. There is a linear combination of the three MBI subscale scores that significantly discriminates between male and female teachers.

Hypothesis 36. There is a linear combination of the three MBI subscale scores that significantly discriminates between teachers who are parents and teachers who are not.

Hypothesis 37. There is a linear combination of the three MBI subscale scores that significantly discriminates among teachers who are married, single, separated/divorced, or widowed.

Hypothesis 38. There is a linear combination of the three MBI subscale scores that significantly discriminates among teachers 21-30 years of age, teachers 31-40 years of age, teachers 41-50 years of age, and teachers 51-plus years of age.

Hypothesis 39. There is a linear combination of the three MBI subscale scores that significantly discriminates among elementary teachers, junior-high/middle-school teachers, and senior-high-school teachers.

Hypothesis 40. There is a linear combination of the three MBI subscale scores that significantly discriminates among teachers who have been teaching 0-5 years, 6-15 years, 16-25 years, and 26-plus years.

Hypothesis 41. There is a linear combination of the three MBI subscale scores that significantly discriminates between teachers who actively initiate coping strategies to alleviate stress and teachers who do not.

Importance of the Study

This study is important in the following ways:

1. It will create an awareness in teachers for the need to acknowledge the stressors in their work and to develop coping strategies to alleviate the symptoms of stress which can lead to burnout.

2. Administrators and teachers will be able to look at the source of the stressors and work together to alter program and/or building procedures (structure) when possible to develop a less stressful work climate.

3. The information will be useful to teachers who are evaluating stress-related issues with regard to the relative advantage of teaching in a small, as opposed to a large, school system.

4. It will create an awareness in new teachers of the possibility of high stress and potential burnout in their chosen profession.

5. It will create an awareness in building administrators of the need to assist their teaching staff members to recognize the warning signs of stress and the potential for avoiding burnout through the development and implementation of coping strategies.

6. Teachers may begin to separate their personal work-related stressors into two categories: (a) those that lie within their sphere of control and which can be alleviated by the development of coping strategies such as reevaluating situations, making adjustments in routines, and asking for help when appropriate, and (b) those that are beyond their control such as negative community opinion which can be alleviated only by learning to not give time and energy to them.

Definition of Terms

The following terms are defined as used in this dissertation.

Burnout. Used as a measurement of the degree of stress, low, average, or high, being experienced.

Stress. Refers to distress (bad stress) as opposed to eustress (good stress).

Mainstream classroom teachers. Refers to certified teachers with educational training that prepares them to teach all subjects to students ranging from Kindergarten

level to Grade 8 or to teach specific curriculum areas to students grades 9 through 12. These teachers do not have training that prepares them to work specifically with special-needs students.

Small School District. Refers to school districts found in small towns or rural settings with a school population, Kindergarten through 12th grade, with fewer than 2,500 students.

Public Schools. Refers to school systems which are supported by public funds.

Classroom Stressors. Refers to stressors that arise from the interaction of the teacher with the students in his/her charge.

Building Structure Stressors. Refers to stressors that arise from the interaction of the teacher with his/her peers, the building administration personnel, or the performance of non-teaching building responsibilities.

Community Stressors. Refers to stressors that arise from the interaction of the teacher with parents of the students assigned to the teacher, local community members, or the public at large.

Coping Strategies. Refers to those strategies an individual uses to reduce his/her level of stress.

Parenting Experience. Refers to those experiences gained through raising children as a biological, step-, or adoptive parent.

Delimitations

This study was delimited to teachers of Kindergarten through 12th grade students in mainstream education programs in schools in the southwestern portion of Lower Michigan.

School systems were delimited to those with Kindergarten through 12th-grade populations with fewer than 2,500 students.

Assumptions

The following assumptions were made:

1. The responses of the teachers reflect their accurate and honest opinions.
2. Individuals have different perceptions of stress.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

Researchers have studied issues relating to the burnout syndrome since the 1970s when Freudenberger documented his observations of mental health care workers. Research has focused on the many professions falling under the category of human service. This review of the literature looks at issues of stress and burnout as they pertain to the teaching profession.

Theory of Stress

Stress is "the nonspecific response of the body to any demand made" (Selye, 1978, p. 74). Selye viewed stress as a vital biological component of humans and sees death as the only way to avoid it. The development of the concept of the General Adaptation Syndrome (GAS) is the result of Selye's early work. The syndrome comprises the stages of an individual's response to a stressor that has not been previously encountered or to which the individual has not become adapted. These stressors may be classified as either distress (bad stress) such as losing one's job or the death of a spouse, or eustress (good stress) such as getting married or achieving a sought-after goal.

The GAS consists of the following stages:

1. The Alarm Reaction. The individual reacts to a stimulus (stressor) which he/she has not previously encountered. The individual is suddenly called upon to react to this new stressor to protect himself/herself. A physiological reaction takes place.

2. The Stage of Resistance. The individual attempts to adapt to the new stressor and maintain his/her physiological response to the stressor until the body has accepted it. If the stressor continues at a level which requires constant adaptive attempts, then the final stage is reached.

3. The Stage of Exhaustion. The immediate response to the stressor ceases.

Individuals do not have an unlimited supply of adaptive energy. If the impact of the stressor on the individual continues, then the stages begin again. In time, unrelieved stress will affect the individual's physical well- being.

Selye's research into the phenomenon of stress led to his seeing individuals as always in a state of stress. Individuals maintain a relationship between distress and eustress that is balanced with the states of hyperstress (overstress), which if unrelieved may lead to illness and hypostress (understress), which leads to boredom.

Theory of Burnout

Fruedenberger (1974), working with staff members of free clinics and halfway houses, observed a pattern of response to prolonged job-related stress. Over time, the workers became ineffectual in their jobs. He termed this behavioral change "burnout," the result of physical and mental exhaustion due to excessive demands on energy, strength, and resources.

Health and social service workers are particularly vulnerable to burnout (Maslach, 1976). Their jobs require that they work closely with emotionally troubled and often demanding human beings. In child care work an effective professional is one who is dedicated, giving of him/herself when the need is perceived in the child. The job requires the worker to process a great deal of information, quickly and the task is often completed in an atmosphere of conflict. The need of a worker to view him/herself as successful based on outcomes is often difficult as the resolution of cases is not always known or if known, a clear distinction of what is a positive resolution is unclear (Mattingly, 1977).

As the job-related stress continues, physical and emotional exhaustion increases. Burnout symptoms vary with the worker. Some workers become cynical, negative, and inflexible in their thinking. Limiting actual client contact and/or using intellectualization or jargon terms when discussing client-related issues are other signs of the increasing toll of stress. "Burnout tends to afflict people who enter their professions highly motivated and idealistic, expecting their work to give their lives a sense of meaning" (Pines & Aronson, 1989, p. 10).

Dedication and commitment affixed to an ideal or standard that is unrealistically high may be significant factors in burnout (Freudenberger & Richelson, 1980). Sakharov and Farber (1983), interviewing early childhood teachers, pediatric nurses, and pediatricians, found that the majority entered their profession because they wanted to care for children. The desire to nurture and help children was specifically stated by 80% of those interviewed.

Cherniss (1980) defined burnout as a, "psychological withdrawal from work in response to excessive stress or dissatisfaction. Burnout is used to refer to the situation in which what was formerly a 'calling' becomes merely a job" (p. 16). He saw burnout as a "transactional" process consisting of three stages.

1. Imbalance between resources and demand.
2. Immediate, short-term emotional response to this imbalance, characterized by feelings of anxiety, tension, fatigue, and exhaustion.
3. Changes in attitude and behavior, i.e., a tendency to treat clients in a detached and mechanical fashion. (p. 17)

Dehumanization is a process in which one develops "a decreased awareness of the human attributes of others and a loss of humanity in interpersonal interactions" (Maslach & Pines, 1977, p. 101). Through the dehumanization process workers are able to create a psychological distance from their clients. In their research, Maslach and Pines found their subjects feeling isolated to the point that many of them were not aware that some of their peers were experiencing similar feelings. In another study, Maslach (1976) found that child-care workers, who spent all of their time working with troubled children, were experiencing more symptoms of burnout than their directors whose duties required less direct contact with clients. Maslach also found that the direct-child-care workers were returning to school for additional course work that would qualify them for non-client positions.

Maslachs and Pines's (1977) research with child-care workers led to their belief that the causes of burnout are less often tied to personality traits of workers than to situational pressures resulting from the contact between child-care worker and client.

As researchers continue to study the phenomena of burnout, new definitions are formulated. Maslach (1982b) found that among the many definitions there appeared to be three points of general agreement.

1. Burnout occurs at an individual level. The unique makeup of individuals is a factor in when burnout will occur and how it will manifest itself.

2. Burnout is an internal psychological experience involving feelings, attitudes, motives, and expectations which are, again, unique to each individual.

3. Burnout is a negative experience for the individual in that it concerns problems, distress, discomfort, dysfunction, and/or negative consequences. The negative experience of burnout affects not only the individual but also colleagues, clients/students, as well as family members.

Sources of Stress

While day-to-day job stressors related directly to students (i.e., discipline concerns and disinterest/apathy) strain a teacher's personal resources, pressures outside the classroom may have an even greater affect. Conditions of work rather than the experience of teaching may lead to job dissatisfaction and decisions to leave teaching (Kyriacou & Sutcliffe, 1979).

In a study by Glasser (1980) 14 stressors were identified. Three of the stressors (21%) involved discipline problems with students, class size, and problems with racist and sexist attitudes and actions which affect the classroom. These are primary stressors affecting the education process–the teacher's direct interaction with his/her

students. The remaining 11 of the stressors (79%), which occurred beyond the immediate classroom experience and/or the instructional block of the day, had the potential to be as demanding of a teacher's mental, emotional, and physical resources as the actual teaching task.

In a similar study of rural teachers, 12 stress factors were identified. Of these, 17% were student related and 83% were other school- related concerns (Wright & Manera, 1985).

A review of the literature by Farber (1983) yielded similar percentages from 13 identified stressors–23% were student-related issues and 77% were issues external to the direct teaching experience.

Student Discipline

Discipline was a concern of teachers that has been found on all lists of teaching stressors. A National Education Association poll found 75% of the teachers believed that discipline problems impaired their teaching effectiveness (Farber & Miller, 1981). Among elementary and junior-high teachers, who are having increasing discipline concerns, Gold (1985) found slightly greater depersonalization and lower personal accomplishment levels on the MBI.

In a study by Feitler and Tokar (1982) a majority of teachers, 58%, stated that disruptive students were the number one cause of job-related stress. However, rather than overall student behavior being the cause, teachers found stress was most often produced by a few students' chronic misbehavior.

The problem of maintaining discipline was growing concern for teachers employed in all schools but was of particular concern for teachers of large, inner-city schools (Dworkin, 1987; Pines & Aronson, 1989). Violence, particularly in inner-city schools, is occurring frequently. Discipline and violence are considered to be one of the sources of stress unique to teaching (Needle, Griffin, Svendsen, & Berney, 1980). Bloch (1977) found symptoms of fear, anxiety, and depression in an evaluation of 250 teachers from the Los Angeles Unified School District who had all faced physical assaults, assaults with weapons, or continued harassment and threats from students or parents.

Student Apathy

High levels of student apathy were a constant source of stress for teachers (Byrne, 1991; Farber & Miller, 1981; Pines & Aronson, 1989). It has been found at all grade levels but is particularly disturbing when 45% of Kindergarten and first-grade teachers ranked disinterested or uninvolved students as one of the five most stressful issues with which they must work (Raschke, Dedrick, Strathe, & Hawkes, 1985).

Peer Relationships

A sense of isolation is inherent in the teaching profession. Teachers spend all day with children, with very little adult contact and few opportunities for collegial interaction (Maeroff, 1988; Mazur & Lynch, 1989).

Byrne (1991) found that observing apathy and increasing burnout in one's colleagues was listed as a factor contributing to stress in a study of 325 junior- and senior-high teachers but it was not listed by the 98 elementary teachers in this study.

However, in another study, psychological symptom levels were found to be lower when colleague support was present (Schonfeld, 1990).

Building Organization/Structure

Autonomy, the perceived need for authority, control, and influence, is directly related to a teacher's sense of job satisfaction (Kreis & Brockopp, 1986; Maslach & Pines, 1977; Pines, Aronson, & Kafry, 1981). Teachers working in buildings whose organization is perceived as rigid and inflexible report higher levels of burnout. Rigidity and inflexibility allow little room for personal control or individual decision making in daily routines (Brisse, Hoover-Dempsey, & Bassler, 1988). In a study of high and low burnout schools, Friedman (1991) found that in highly organized schools with "clear and tight set rules and regulations . . . there is a hidden pressure on each individual to adjust to existing standards, without having any influence in defining and establishing them" (p. 331).

Teachers are highly trained professionals. Being responsible for non-instructional duties–hall monitoring, recess duties, recording data, and running copy machines–is a questionable use of their talents and an ongoing source of stress (Byrne, 1991; Maeroff, 1988; Needle et al., 1980).

Building Administration

Having an almost child-like relationship with a school system authority structure is not an uncommon occurrence for teachers. They often operate under a hierarchy of grade level, building, and district guidelines leaving very little room for

feeling empowered (Maeroff, 1988). Stress levels only increase when teachers are faced with involuntary transfers and are assigned teaching responsibilities which lie outside of their field of study and/or preferred assignment area (Farber & Miller, 1981).

In a study of 200 suburban high-school teachers' perceptions of principals' leadership style, a significant correlation with teacher burnout was not found. This may be due in part to teachers seeing the principal as one step in a chain of command which limits the principal's authority. When the parts of leadership style were examined, decision making still was not significantly related to burnout, but administrative support for teachers was found to be significantly related to burnout (Mazur & Lynch, 1989).

Other research involving elementary and secondary teachers enrolled in graduate studies found that a leadership style with a high level of structure and consideration for individuals was found to be correlated to lower levels of perceived stress and high degrees of satisfaction with the principal. Fifty-five percent of the teachers who responded to this study taught in buildings with faculties of fewer than 25 teachers. This style of leadership was viewed as helping teacher performance (Blase, Dedrick, & Strathe, 1986).

In a study of teachers' satisfaction with their career, it was found that "the recognition actually received from administrators and supervisors had a strong positive relationship to career satisfaction" (Chapman & Lowther, 1982, p. 246). Feelings of personal accomplishment was highest for teachers working with a supportive principal and lack of principal support has been correlated with depersonalization (Jackson, Schwab, & Schuler, 1986).

Parent Support

In listing factors contributing to stress, Byrne (1991) found that elementary teachers ranked parents' expectations fourth out of nine factors and junior-high teachers ranked them third out of 10. Lack of parent support and recognition was viewed as a separate stressor and was ranked seventh out of nine by elementary teachers, eighth out of 10 by junior-high teachers and third out of 10 by senior-high teachers.

Public View of the Teaching Profession

Teachers are highly skilled professionals with a minimum of 4 years of higher education preparation in their field. Because of an erroneous perception that teachers work only during the hours of their students' attendance, parents and taxpayers often view teachers as part-time employees (Maeroff, 1988). The assumption that "if students do not learn it is because the teacher did not teach" leads not only to unrealistic expectations that are held by students, parents, the public, and teachers, but this also further strains teachers' personal and professional self-esteem (Pines & Aronson, 1989).

In a public opinion survey of perceptions of problems with schools, the difficulty of getting good teachers was ranked fourth after lack of discipline, integration-segregation issues, and lack of financial support. Parents' lack of interest and crime/violence were not viewed as major concerns by the public. This difference in perception adds to the stress that teachers face and puts additional strain on teacher-parent communication (Needle et al., 1980).

There is a growing lack of confidence in the public education system. One measure of this changing attitude is found in parents' view of teaching as a viable career choice for their children. In 1969, 80% of parents polled expressed this opinion. Eleven years later, in 1980, only 56% felt that teaching would be a good profession for their children. This consequence–the erosion of confidence in public education–affects teachers as "they are less likely to be respected and more likely to be challenged by parents" (Dworkin, 1987, p. 11).

Teachers' Perceptions of Accomplishments

Strong correlations exist between how teachers perceive themselves and burnout; high levels of esteem correlate with lower levels of burnout (Anderson & Iwanicki, 1984). Teachers' perceptions of how others view their professional competence are also a predictor of burnout. When the others significant to the teacher–peers, administration, students, and parents–hold the teacher in high regard, burnout is unlikely to occur (Friedman & Farber, 1992; Lowther, Chapman, & Stark, 1984).

Teachers are less likely to report feelings of burnout if they find teaching personally rewarding and they believe that they are being effective (Brisse et al., 1988). Teachers who feel that they are "consequential," and that their work is making a difference in the lives of their students, are able to tolerate a great deal of the stress inherent in teaching and thereby avoid burnout (Friedman & Farber, 1992).

Demographic Variables

Gender

Women are disproportionately represented in the teaching, counseling, and nursing professions. Society sees female professionals as being feminine, less aggressive, active, more sensitive, warm, and kind (Pines & Aronson, 1989). These very attributes which draw women to helping professions and include the qualities of affection, caring, empathy, and sensitivity to others, may leave them more vulnerable to burnout.

When comparing professional women and men at similar career life positions, Pines and Aronson (1989) found differences in the degree of burnout. The women in this study had slightly higher levels of burnout and four times more burnout at the extreme level than the men. The women also felt they had "less freedom, autonomy, and influence in their work as well as less variety, less challenge, and a less positive work environment" (p. 121). Another difference was found with regard to relationships. For women, good personal relationships correlated positively with burnout, but this was less true for men. Burnout was also found to be lower for employees, especially women, who were involved in social networks and support systems.

In an investigation of University of Michigan graduates from 1947-1976 who were certified teachers, women indicated greater satisfaction with their chosen career than men (Chapman & Lowther, 1982). Characteristics of high and low burnout elementary schools were identified in a study by Friedman (1991). High burnout school staffs were found to have fewer women teachers.

In studies using the Maslach Burnout Inventory (MBI) to measure frequency and degree of burnout among teachers, men were found to have significantly higher scores than women on the depersonalization scale–negative feelings toward students–for both frequency and intensity (Anderson & Iwanicki, 1984; Greenglass & Burke, 1988; Malanowski & Wood, 1984; Maslach & Jackson, 1981; Russell, Altmaier, & VanVelzen, 1987; Schwab & Iwanicki, 1982; Schwab et al., 1986). However, Gold (1985) found elementary and junior-high female teachers to have only slightly lower levels of depersonalization and marginally higher degrees of personal accomplishment–feelings of being effective, energized, and being able to competently handle the demands made upon them–than males.

Female teachers scored higher on the emotional exhaustion scale–feelings of frustration, fatigue, and stress–for both frequency and intensity than did male teachers (Byrne, 1991; Maslach & Jackson, 1981). Male teachers also scored higher in both frequency and intensity than female teachers on the personal accomplishment scale.

Age

In a review of three multipurpose, national probability studies of employment, which were undertaken in 1967, 1973, and 1977, Lowther, Gill, and Coppard (1985) identified a number of age related factors in teacher responses. They found job satisfaction for teachers increasing with age and job rewards becoming more important. The value of the job neither increased nor decreased over time, but job satisfaction for younger teachers was directly related to the work of teaching while for

older teachers job satisfaction was related to matters extrinsic to their work. In another study, Chapman and Lowther (1982) reported that leadership, accomplishment, and recognition had strong positive relationships to job satisfaction among experienced teachers.

Age is a factor in the degree of stress experienced and the potential for burnout in teachers. Farber (1984) found the 34-44 age group to be most at risk of burnout. Friedman (1991) also found age associated with levels of burnout. When characteristics of high and low burnout elementary schools were identified, the high burnout schools were found to have more older teachers than the low burnout schools.

In another study (Feitler & Tokar, 1982), the 31-44 age group reported the highest level of stress. Eighteen percent rated their jobs as very to extremely stressful as compared to 13% of those under 30 years of age and 17% of those over 45 years of age.

In a study using the MBI, younger teachers, 20-39, scored significantly higher on the emotional exhaustion subscale. They experienced significantly more intense feelings of exhaustion and fatigue than did 50-year-olds. The researchers suggested that one reason for this difference may be that highly stressed and/or burned-out younger teachers leave the profession early (Byrne, 1991; Schwab et al., 1986; Schwab & Iwanicki, 1982).

Maslach and Jackson (1981) found younger people scoring higher than older people on the depersonalization subscale of the MBI. As age increased, there was a consistent decline in both frequency and intensity. Older people scored higher on the personal accomplishment subscale in frequency and younger people scored higher on the

emotional exhaustion subscale on intensity. In general, younger teachers experienced more stress as measured by the emotional exhaustion and depersonalization subscales of the MBI (Anderson & Iwanicki, 1984; Gold, 1985; Russell et al., 1987).

Marital Status and Children

Pines and Aronson (1989), in a study to explore the issue of burnout and its causes, looked at women who were at different stages of their teaching career: preprofessional women in college whose average age was 21, professional women whose average age was 34, and postprofessional women whose average age was 66. They found that the professional women/housewives-mothers, who would have appeared to be the most overburdened with what is deemed to be two full-time jobs, projected the most positive image. These women were satisfied with their work and found their professional role enjoyable and rewarding. They had overall good health and felt that both family and career gave meaning to their lives. The preprofessional women reported the most burnout and were the least satisfied with their work and their lives. The postprofessional women experienced the poorest health, although they were the least overextended and had fewer distractions and conflicts. The also believed they had the least unconditional support when they needed it.

When measurements of burnout of couples with children were compared to childless couples both the male and female parents scored lower than the childless married men and women. Individuals who are parents are usually older and at a more mature phase of their lives. Also, parents through their family life experiences may have

gained skills which enable them to work more comfortably with people and their problems. They may look at their careers from a security viewpoint as opposed to one of personal accomplishment (Byrne, 1991; Maslach & Jackson, 1985).

Maslach and Jackson (1981) found marital status significantly related to the emotional exhaustion subscale of the MBI, but not to depersonalization or personal accomplishment. Single and divorced people scored higher than married people on the emotional exhaustion scale in both frequency and intensity. In general, married teachers and those with children were found to experience less burnout than unmarried teachers or married teachers without children (Greenglass & Burke, 1988). Married primary-level teachers were found to score higher on the personal accomplishment subscale of the MBI than married secondary teachers and unmarried teachers at all levels (Russell et al., 1987). However, Schwab et al. (1986) did not find marital status significantly related to burnout, and Gold (1985) reported only a slightly greater risk for single teachers than those who have been married.

Grade Level Taught

The grade level taught has been found to impact teacher stress level and vulnerability to burnout. The higher the grade level, the greater the stress. In studies of Kindergarten through 12th grade teachers it was found that 19% of high-school teachers, 16% of junior-high teachers, and 13% of elementary teachers felt their jobs were very to extremely stressful (Feitler & Tokar, 1982; Gold, 1985; Malik, Mueller, & Meinke,

1991). Junior-high teachers were found to be most at risk of burnout in a study of suburban and small-town teachers (Farber, 1984).

A significant difference in teachers' sense of depersonalization was found when comparing junior- and senior-high teachers to elementary teachers. The junior- and senior-high teachers had more negative feelings towards their students, and the senior-high teachers also indicated less frequent feelings of accomplishment in their profession. Elementary teachers were also found to have a higher sense of personal accomplishment when compared to junior- and senior-high teachers (Anderson & Iwanicki, 1984; Malanowski & Wood, 1984; Schwab et al., 1986; Schwab & Iwanicki, 1982).

Years of Experience

In a study of Ohio teachers, Feitler and Tokar (1982) surveyed 81 first-year teachers and found that only 16% indicated that their jobs were very to extremely stressful. Seventy-seven percent rated their jobs as mildly to moderately stressful, and 7% reported no job-related stress. In the same study, 350 teachers within 5 years of retirement were surveyed. Eighteen percent reported that their jobs were in the very to extremely stressful range. Twelve percent of this group reported that their jobs were not at all stressful. Schwab et al. (1986) found no significant link between number of years of experience and burnout among New Hampshire teachers.

Coping

Coping is a natural human response as is the stress response (Cherniss, 1980). Like stress, coping is a personal and complex mechanism which has the potential for both positive or negative outcomes.

Definition

Cherniss (1980) identified coping as an important component in stress theory. He stated: "Coping refers to these efforts to manage demands and conflicts which tax or exceed the person's resources. Coping may be cognitive, behavioral or a combination of the two" (p. 45).

An individual experiencing stress to the point of exhaustion will initiate coping strategies. Strategies which involve using detached and mechanical treatments of others, using dehumanizing language, intellectualizing, and creating barriers to distance oneself from others will only appear to give temporary relief, and burnout is likely to occur (Alschuler, 1980; Maslach, 1982a; Maslach & Pines, 1977). Schonfeld (1990) found veteran New York City teachers to experience fewer psychological symptoms and low morale if they employed coping behaviors.

Coping Mechanisms

Pines and Kafry (1982) studied coping techniques and identified four coping-strategy types.

1. Direct-active coping. Individuals attempt to take control of the source of stress. They change the source of the stress, confront the source of stress in an effort to limit its effect, and study the situation to find positive aspects.

2. Direct-inactive coping. An example of individuals using this coping mechanism includes attempting to ignore or avoid the source of stress to the point of even leaving the stressful situation.

3. Indirect-active coping. Examples of this type include individuals talking with others about the source of stress, changing themselves to adapt to the source of stress, or getting involved in other activities.

4. Indirect-inactive coping. Individuals using this coping strategy may use drinking or drugs to find release from their stress. They may also become ill or mentally and/or physically collapse.

The subjects in this study were 220 human-service professionals from many fields, including education. The researchers found that active strategies were most often used and were reported to be most successful whereas inactive strategies were used less frequently and were considered to be the least successful. Active strategies were found to relieve the experience of burnout as they changed the source of stress. One exception was determined by the researchers. They believed that the direct-inactive strategy of ignoring the source of stress was more related to the active rather than inactive strategies. They reasoned that the conscious decision to ignore the source of stress was in itself an active behavior as ignoring and denying are not the same. Women tended to use indirect methods of coping more whereas men preferred the direct methods.

Social Support Systems

Having a system of social support is a recurring theme among researchers. A sense of isolation is inherent in the teaching profession and for some teachers its impact intensifies in the state of hyperstress. Maeroff (1988) encouraged finding ways to bring teachers together and create a sense of empowerment. Creating a "psychological sense of community" among teachers enhances an atmosphere conducive to increasing teacher communication thereby reducing the sense of isolation and supporting effective coping mechanisms (Farber, 1983; Farber & Miller, 1981).

Research of communication patterns found in public school suggests that group support may not always be the universal stress reducer. Ray (1991) found that isolates, individuals with no reported reciprocal links to others, reported significantly less stress than individuals in a group who act as a link to other groups, members of groups who interact frequently with other group members, or members of a dyad who link with other individuals who are not linked themselves. No significant difference was found in levels of burnout in isolates and group members.

In addition to workplace support systems, personal support systems were also very effective. Married teachers, both men and women, experience less burnout than their single peers (Maslach & Jackson, 1981). Social support systems are viewed as being important by women, but men are less likely to turn to them unless they are burned out (Pines, 1983).

Schwab et al. (1986) suggested that the school administration is in a position to assist teachers in the development of a work-based social support system. The

researchers made the following suggestions, which they felt would provide immeasurable support:

1. Provide adequate time for teacher interaction to facilitate communication.
2. Encourage mentor relationships between experienced teachers and new teachers with an express purpose of helping the new teachers to deal with stress issues related to their new teaching positions.
3. Address unrealistic expectations and the realities of classroom life.
4. Be available to answer student and/or teaching-skill-focused questions.

Individual Coping Strategies

The resolution of the state of hyperstress rests with the individual. Farber (1983) suggested that individuals attend to their own physical well-being concerns, become involved in social and recreational activities, and learn to organize and set priorities.

Alschuler (1980), looking specifically at teachers, developed a list of six "cures for stress." They are as follows:

1. Prevent stress by being alert to early signs and by helping others, i.e., be supportive of colleagues; make a practice of sharing your feelings.
2. Reduce the stressors, i.e., learn to say no; lighten the load outside of school.
3. Change your perception of the stress, i.e., learn to set more realistic goals; recognize your limits.
4. Manage your physiological state, i.e., learn to relax without drugs; get into good physical condition.

5. Improve your coping abilities, i.e., manage your time better; get help from a colleague, a friend or a professional helper.

6. Counteract stress, i.e., develop a positive addiction–jogging, swimming, hiking; be good to yourself. (p. 10)

Maslach (1982a) suggested that individuals learn to work smarter. This would be accomplished by employing a few of the following steps when the need to reduce stress arises:

1. Making changes in routine

2. Setting realistic, specific goals

3. Doing things differently

4. Taking breaks when needed.

These suggestions involve taking a thoughtful look at the sources of stress, assessing the situation, and developing alternatives. The process in itself will give the individual a sense of being in control, which is also a factor in stress reduction.

Teacher Stress and Burnout

Having entered the teaching profession with an expectation of making a difference in the lives of their students, teachers, when faced with the realities of what they can personally accomplish, may feel they have failed and blame themselves (Schwab et al., 1986). The discrepancy which often exists between a teacher's needs, values, and expectations as they relate to the teaching profession and the actual occupational rewards/job demands and the capacity of the individual to meet the challenge may lead to stress and create the potential for burnout (Needle et al., 1980).

Burnout as it relates to the teaching profession may be defined as "a function of feeling inconsequential–feeling that no matter how hard one works, the payoffs in terms of accomplishment, recognition, or appreciation are not there" (Farber, 1984, p. 325).

Feitler and Tokar (1982) in a review of data collected from 3,300 Kindergarten through 12th grade teachers in Ohio found that 16% believed their "job environments" were very to extremely stressful. The majority, 76%, indicated that their work was mild to moderately stressful. In a similar study of suburban and small-town teachers, 20-25% appeared vulnerable to burnout and 10-15% appeared to already be burned out (Farber, 1984).

Alschuler (1980) observed that the transition from feeling stressed to the point of hyperstress and possibly burnout is marked by a gradual erosion of teachers' ability to care and show concern for their students and fellow teachers. In order to cope with increasing stress, teachers may begin to gradually distance themselves from others. The following behaviors may be observed:

1. Spending as little time with students and peers as possible.
2. Referring to human beings in terms of a single characteristic–my slow readers.
3. The M.A.S.H. Syndrome–joking about someone's problems.
4. The petty bureaucrat response–dealing with people using formulas.
5. Intellectualizing about the causes of problems but not empathizing with the person.

6. Decreased contact, i.e., decreased eye contact, standing farther away, shorter conversations.

7. Placing barriers between worklife and homelife (Alschuler, 1980, p. 9).

Geographic location of the school system may be a factor in degree of stress experienced by teachers. Feitler and Tokar (1982), in their study of Kindergarten through 12th-grade teachers, drew their sample from urban, suburban, and rural schools in Ohio. Twenty percent of urban school teachers, 16% of suburban school teachers, and 14% of rural school teachers classified their jobs as being very stressful.

Summary

As this review of the literature demonstrates, many researchers have studied the effects that stress and ultimately burnout have on individuals in the teaching profession. Although the literature review yielded supporting data for the focus of this research–stress/burnout, source of stressors, coping strategies–the following points suggested areas for further study:

1. Much of the literature reflects research conducted in large-city school systems or combined data from city, suburban, and small-town schools within a specific state.

2. The works referencing teacher-identified stressors do not make distinctions based on size of school, and the majority of these studies were researched prior to the mid-1980s.

3. Many of the suggestions for managing stress are based on the result of experimental projects conducted in large school systems. No studies were found which addressed the issues of stress management in small school systems.

CHAPTER III

METHODOLOGY

Introduction

In this chapter the population and sample, dependent and independent variables, procedures, instrumentation, hypotheses, and data analysis are discussed. This research study was designed to explore the extent to which variations in the three subscales of the Maslach Burnout Inventory (MBI) are influenced by the following:

1. The origin of job-related stressors (i.e., classroom, building, or community)

2. Whether teachers use stress coping mechanisms

3. The demographic variables of gender, parental status, marital status, age, teaching assignment, and years of teaching experience.

Population and Sample

The population was drawn from 11 small town/rural schools in Southwestern Michigan. Each school district has a K-12 student population of less than 2,500.

Power Analysis

The power analysis was undertaken with a medium effect size, alpha of .05, and power = .90.

Product-Moment Correlation and Regression Analysis

With a medium effect size of .3 and $r^2 = .09$, Cohen's Table 3.4.1 (Cohen, 1969, p. 98) requires a minimum sample of $n = 112$.

t Test

With a medium effect size of .5, Cohen's Table 2.4.1 (Cohen, 1969, p. 52) requires a minimum sample size of 85 in each of the two groups being compared for a total $n = 170$.

Analysis of Variance

With a medium effect size of .25 and the number of groups = 4 (degrees of freedom = 3), Cohen's Table 8.4.1 (1969, p. 374) requires a sample size of 68 in each of four equal groups for a total $n = 272$. With unequal groups, the power will be reduced.

For the multivariate analysis, Kendall (1975, p. 11) recommended that the sample size be at least 10 times as great as the number of variables in any single analysis. Thus, 60 cases would be adequate to give stability to the correlation matrix. As the largest *n* yielded by the power analysis is 272 for equal groups, a sample of 300 was sought.

The Variables

The dependent variables for this study were the degrees of burnout experienced as indicated by the subscales of the Maslach Burnout Inventory and the independent variables for this study included three scales from the Stressor Source Check List: (1) Classroom Stressors, (2) Building Stressors, and (3) Community Stressors.

In addition, the independent variables include whether or not coping strategies are initiated by the individual to alleviate stress, and the following demographic variables: (1) teachers' gender, (2) teachers' parental status, (3) teachers' age, (4) teachers' marital status, (5) teachers' teaching assignment, and (6) teachers' years of teaching experience (see Appendix A).

Instrumentation

Two instruments were used in this study. One was The Maslach Burnout Inventory (MBI), a standardized instrument, and the other was the Stressor Source Check List, a researcher-designed instrument.

The Maslach Burnout Inventory

The Maslach Burnout Inventory (MBI) was developed by Christina Maslach and Susan E. Jackson. It is based on their theory that individuals, whose profession involves working closely with clients/students to enhance growth or change, and whose measurement of professional competency/success is based on the changes demonstrated by their clients/students, may face, over time, a degree of chronic stress which may result in the condition defined as burnout (Maslach & Jackson, 1986).

The MBI consists of 22 items which are evaluated in terms of frequency ranging from "never" (0) to "every day" (6). (See Appendix B.) Results from the subscales are reported in terms of a range of low, average, or high degree of burnout. The subscales are Emotional Exhaustion, Depersonalization, and Personal Accomplishment. Maslach & Jackson (1986) conceptualize each of these subscales as a continuous variable.

Emotional Exhaustion (EE): This subscale, consisting of nine items, focuses on the extent to which individuals feel themselves to be in a state of emotional bankruptcy. The psychological resources of these individuals are depleted and they are no longer able to give of themselves as they have in the past (Maslach & Jackson, 1986).

Depersonalization (DP): This subscale, consisting of five items, looks at the degree to which individuals pull back from interaction with others, peers as well as clients/students. In an effort to protect/conserve their reduced supply of emotional energy, individuals may develop a cynical or negative attitude toward their clients/students (Maslach & Jackson, 1986).

Personal Accomplishment (PA): This subscale, consisting of eight items, looks at individuals' assessment of their professional accomplishments in relationship to their work with people (Maslach & Jackson, 1986).

The 22 items of the MBI are written in a form which creates a positive/ negative range of expression. For example, in "I feel frustrated by my work" (EE), the use of the word "frustrated" implies a negative emotional state while in the statement, "I

feel very energetic" (PA) the use of the word "energetic" implies a positive emotional state.

Reliability

Reliability estimates are given in Table 1. These coefficients indicate an adequate level of reliability for the three scales.

TABLE 1

MBI RELIABILITY COEFFICIENTS

Scale	Coefficient Alpha ($n = 1316$)	Test/Retest Data: Interval 2 - 4 weeks ($n = 53$)	Test/Retest Data: Interval 1 year ($n = 248$)
Emotional Exhaustion	.90	.82	.60
Depersonalization	.79	.60	.54
Personal Accomplishment	.71	.80	.57

Validity

Convergent validity has been demonstrated using three methods: (1) external validation of personal experience, (2) dimensions of the job experience, and (3) personal outcomes.

External Validation of Personal Experience: This procedure used a knowledgeable, outside observer to make an independent assessment of the individual's behavior/experience. The results were used to corroborate the individuals' self-

assessment. In one study, co-workers were used as outside observers in the work setting with a group of mental health workers. The co-workers' ratings correlated with the Depersonalization subscale score but were not statistically significant with the Personal Accomplishment subscale. In another study, spouses of police officers were asked to make the validating assessment from home observations. The spouses' ratings correlated with scores on both the Emotional Exhaustion and Personal Accomplishment subscales (Maslach & Jackson, 1986).

Dimensions of the Job Experience: One procedure looked specifically at the relationship between experienced burnout and large case loads (over 40 people a day) among a group of physicians in a health maintenance organization. Individuals with high patient contact scored high on the MBI emotional exhaustion scale.

Another procedure compared MBI results from a group of social service and mental health workers with their scores on Hackman and Oldham's Job Diagnostic Survey (JDS) . Comparison of the dimension, "feedback from the job itself," found that high scores on the JDS were comparable with low scores on the Emotional Exhaustion and Depersonalization subscales. High scores on another dimension, "task significance," correlated positively with high scores on the Personal Accomplishment subscale (Maslach & Jackson, 1986).

Personal Outcomes: This method studied a number of hypothetical relationships between experienced burnout and various outcomes or personal reactions. The different groups included in these studies were nurses, social service and mental health workers, and police officers. Their MBI scores were compared with results from

either the JDS, a questionnaire survey, or knowledgeable, outside observer data. In each study, correlation between the MBI scores and the validating method was shown (Maslach & Jackson, 1986).

The issue of discriminant validity was explored by examining the possibility that burnout was simply a matter of job dissatisfaction. A comparison of MBI scores and the JDS general job satisfaction scale yielded a moderate negative correlation with both Emotional Exhaustion and Depersonalization subscales and a slightly positive correlation with the Personal Accomplishment subscale (Maslach & Jackson, 1986).

In another study cited by Maslach & Jackson (1986), the possible effect of a social desirability response was explored with a group of graduate students in social welfare. The students completed the MBI and the Crowne-Marlowe Social Desirability Scale (SD). A comparison failed to yield a significant correlation at the .05 level.

The MBI Form Ed was used in this study. The substitution of the word "student" for "recipient" was the only change from the standard MBI form (Maslach & Jackson, 1986). The results were computer scored.

Stressor Source Check List

The Stressor Source Check List has been constructed from a pool of items identified as sources of stress. The items making up the pool came from a teacher survey (see Appendix C).

Teachers were asked to identify three sources of stress from each of the following areas: (1) Classroom Stressors, (2) Building Stressors, and (3) Community

Stressors. Twenty elementary teachers, 10 middle-school/junior-high-school, and 10 high-school teachers from a small school district were asked to complete the survey. Fifty percent of the elementary teachers and 80% of the middle-school/junior-high-school and high-school teachers returned their surveys.

From the teachers' narrative responses a list of 144 stress topics was developed (see Appendix D). Ten teachers were asked to identify each stressor as being either a classroom, building, or community stressor (see Appendix F). The panel of judges was comprised of five elementary, two middle-school/junior-high-school, and three high-school teachers. Items with 80% or greater agreement were considered for the final check list.

From the judges' responses, 16 community stressor items met the 80% or greater agreement requirement. They included the following:

1. Belief that teachers are overpaid
2. Belief that teaching is easy
3. Perception that teachers work only 6 hours/day, 9 months/year
4. Belief that good education should be cheap
5. General lack of parental support
6. Lack of recognition of the school's contribution to society
7. Negative attitudes about teachers
8. Negative perceptions about teachers
9. Negative messages in the media
10. Public airing of concerns about teaching

11. Perception that teachers are not professionals
12. Negative perception of schools
12. Non-school personnel lack of understanding of current educational issues
13. Perception that teaching is shallow and mindless work
14. Special interest groups
15. Special interest groups
16. Uninformed public

Item 2 was eliminated as item 3 expressed a similar belief in an expanded form. Item 7 was eliminated as item 8 stated the issue in a more general form. Item 9 was eliminated in favor of item 10, which was a clearer expression of the same issue. This reduced the list of community stressors to 13.

From the judges' responses, 15 building stressor items met the 80% or greater agreement requirement. They included the following:

1. Amount of paper work for the school district
2. Differing educational philosophies
3. Failure of staff members to share responsibilities
4. Failure of staff members to support school rules
5 Lack of staff consistency regarding school rules
6. Lack of staff cooperation
7. Lack of staff cooperation and support
8. Lack of communication with regard to student activities
9. Need for more in-service time

10. Number of meetings
11. Sense of competitiveness between staff members
12. Staff interpersonal issues
13. Teacher isolation from peers
14. Work ethic variations among staff members
15. Workload inequities.

Item 4 was eliminated as it expressed a similar issue as item 5. Item 6 was eliminated as item 7 expressed a similar issue in an expanded format. This reduced the building-item list to 13.

From the judges' responses, 14 classroom stressor items met the 80% or greater agreement requirement. They included the following:

1. Amount of paper work
2. Number of papers to correct
3. Disruptive student behavior
4. High-risk students
5. Lack of pride in school work
6. Student failure to comply with directions
7. Student cheating
8. Student lack of basic skills
9. Student hyperactivity
10. Student low achievement when they have the ability
11. Student squabbles

12. Student's failure to attend to the teacher

13. Unmotivated students

14. Noisy classrooms.

Item 2 was eliminated as item 1 expressed a similar but expanded statement of the issue. This reduced the list of building issues to 13.

The 39 items selected for the Stressor Source Check List were arranged randomly using the A.P.L. Random Number Generator Program. Respondents were asked to indicate the degree to which they felt each item creates stress for them. A 5-point Likert scale was used, with 1 indicating "not stressful" and 5 indicating "very stressful" (see Appendix E).

Procedures

The superintendents of 17 schools selected for this study were contacted by letter. The purpose of the study and the details of the data-collection process were explained. The district's superintendent was asked to provide a list of the names of full-time, mainstream teachers to be included in the study (see Appendix F).

Eleven district superintendents responded to the request. Four superintendents provided a roster of their mainstream teachers. Seven of the districts either had a formal policy of not publishing staff names or were reluctant to do so without the staff members' permission. These superintendents requested instead that a number of packets be provided to the district which would then be distributed from the superintendent's office.

Respondents in the four districts for which a roster of names had been provided received an addressed packet through their building offices. The remaining respondents received a packet addressed in the following general manner: REGULAR EDUCATION TEACHER, BUILDING NAME or LEVEL TAUGHT, DISTRICT NAME. The packets included a letter explaining the purpose of the study, a stamped envelope for returning the materials to the researcher, the MBI Form Ed, the Stressor Source Check List, and a demographic sheet.

The teachers were assured that their participation was anonymous; the data were to be reported as group, not individual statistics; and their individual MBI results and a summary of the results of the survey would be made available to them if a self-addressed envelope was included in their completed packet.

Due to the indirect distribution method, through school offices rather than a direct mailing, a tracking system was devised to determine if teachers from all schools were returning completed instruments. Three colors of paper were used: yellow, grey, and white. Also, four print dates, 1/30/98, 1/31/98, 2/1/98, and 2/2/98, were inserted in a footer on the second page of the Stressor Source Check List. Table 2 gives the coding system for the 11 schools and the number of packets distributed per school.

TABLE 2

SURVEY CODING SYSTEM

School	Print Date	Paper Color	# of Packets
1	1/30/98	Yellow	86
2	1/30/98	Grey	78
3	1/30/98	White	75
4	1/31/98	Yellow	95
5	1/31/98	Grey	104
6	1/31/98	White	101
7	2/1/98	Yellow	56
8	2/1/98	Grey	49
9	2/1/98	White	54
10	2/2/98	Yellow	48
11	2/2/98	Grey	65

Hypotheses

The following null hypotheses were tested:

Hypothesis 1. There is no significant correlation between the degree of burnout as measured by the Emotional Exhaustion subscale of the MBI and scores on the SSCL related to classroom issues.

Hypothesis 2. There is no significant correlation between the degree of burnout as measured by the Depersonalization subscale of the MBI and scores on the SSCL related to classroom issues.

Hypothesis 3. There is no significant correlation between the degree of burnout as measured by the Personal Accomplishment subscale of the MBI and scores on the SSCL related to classroom issues.

Hypothesis 4. There is no significant correlation between the degree of burnout as measured by the Emotional Exhaustion subscale of the MBI and scores on the SSCL related to building issues.

Hypothesis 5. There is no significant correlation between the degree of burnout as measured by the Depersonalization subscale of the MBI and scores on the SSCL related to building issues.

Hypothesis 6. There is no significant correlation between the degree of burnout as measured by the Personal Accomplishment subscale of the MBI and scores on the SSCL related to building issues.

Hypothesis 7. There is no significant correlation between the degree of burnout as measured by the Emotional Exhaustion subscale of the MBI and scores on the SSCL related to community issues.

Hypothesis 8. There is no significant correlation between the degree of burnout as measured by the Depersonalization subscale of the MBI and scores on the SSCL related to community issues.

Hypothesis 9. There is no significant correlation between the degree of burnout as measured by the Personal Accomplishment subscale of the MBI and scores on the SSCL related to community issues.

Hypothesis 10. There is no linear combination of the stress scores related to classroom, building, and community stressors which yield a significant multiple correlation with the Emotional Exhaustion subscale of the MBI.

Hypothesis 11. There is no linear combination of the stress scores related to classroom, building, and community stressors which yield a significant multiple correlation with the Depersonalization subscale of the MBI.

Hypothesis 12. There is no linear combination of the stress scores related to classroom, building, and community stressors which yield a significant multiple correlation with the Personal Accomplishment subscale of the MBI.

Hypothesis 13. There is no significant difference in the degree of burnout, as measured by the Emotional Exhaustion subscale of the MBI, between male and female teachers.

Hypothesis 14. There is no significant difference in the degree of burnout, as measured by Depersonalization subscale of the MBI, between male and female teachers.

Hypothesis 15. There is no significant difference in the degree of burnout, as measured by the Personal Accomplishment subscale of the MBI, between male and female teachers.

Hypothesis 16. There is no significant difference in the degree of burnout, as measured by the Emotional Exhaustion subscale of the MBI, between teachers who are parenting and teachers who are not.

Hypothesis 17. There is no significant difference in the degree of burnout, as measured by the Depersonalization subscale of the MBI, between teachers who are parenting and teachers who are not.

Hypothesis 18. There is no significant difference in the degree of burnout, as measured by the Personal Accomplishment subscale of the MBI, between teachers who are parenting and teachers who are not.

Hypothesis 19. There is no significant difference in the degree of burnout, as measured by the Emotional Exhaustion subscale of the MBI, among teachers who are married, single, separated/ divorced, and widowed.

Hypothesis 20. There is no significant difference in the degree of burnout, as measured by the Depersonalization subscale of the MBI, among teachers who are married, single, separated/divorced, and widowed.

Hypothesis 21. There is no significant difference in the degree of burnout, as measured by the Personal Accomplishment subscale of the MBI, among teachers who are married, single, separated/divorced, and widowed.

Hypothesis 22. There is no significant difference in the degree of burnout, as measured by the Emotional Exhaustion subscale of the MBI, between teachers 21-30 years of age, teachers 31-40 years of age, teachers 41-50 years of age, and teachers 51-plus years of age.

Hypothesis 23. There is no significant difference in the degree of burnout, as measured by the Depersonalization subscale of the MBI, between teachers 21-30 years of

age, teachers 31-40 years of age, teachers 41-50 years of age, and teachers 51-plus years of age.

Hypothesis 24. There is no significant difference in the degree of burnout, as measured by the Personal Accomplishment subscale of the MBI, between teachers 21-30 years of age, teachers 31-40 years of age, teachers 41-50 years of age, and teachers 51-plus years of age.

Hypothesis 25. There is no significant difference in the degree of burnout, as measured by the Emotional Exhaustion subscale of the MBI, among elementary teachers, junior-high/middle-school teachers, and senior high-school teachers.

Hypothesis 26. There is no significant difference in the degree of burnout, as measured by the Depersonalization subscale of the MBI, among elementary teachers, junior-high/middle-school teachers, and senior high-school teachers.

Hypothesis 27. There is no significant difference in the degree of burnout, as measured by the Personal Accomplishment subscale of the MBI, among elementary teachers, junior-high/middle-school teachers, and senior high-school teachers.

Hypothesis 28. There is no significant difference in the degree of burnout, as measured by the Emotional Exhaustion subscale of the MBI, between teachers who have been teaching 0-5 years, 6-15 years, 16-25 years, and 26-plus years.

Hypothesis 29. There is no significant difference in the degree of burnout, as measured by the Depersonalization subscale of the MBI, between teachers who have been teaching 0-5 years, 6-15 years, 16-25 years, and 26-plus years.

Hypothesis 30. There is no significant difference in the degree of burnout, as measured by the Personal Accomplishment subscale of the MBI, between teachers who have been teaching 0-5 years, 6-15 years, 16-25 years, and 26-plus years.

Hypothesis 31. There is no significant difference in the degree of burnout, as measured by the Emotional Exhaustion subscale of the MBI, between teachers who actively initiate coping strategies to alleviate stress and teachers who do not.

Hypothesis 32. There is no significant difference in the degree of burnout, as measured by the Depersonalization subscale of the MBI, between teachers who actively initiate coping strategies to alleviate stress and teachers who do not.

Hypothesis 33. There is no significant difference in the degree of burnout, as measured by the Personal Accomplishment subscale of the MBI, between teachers who actively initiate coping strategies to alleviate stress and teachers who do not.

Hypotheses 1, 2, 3, 4, 5, 6, 7, 8, and 9 were tested by product-moment correlation. Hypothesis 10, 11, and 12 were tested by multiple linear regression analysis. Hypotheses 13, 14, 15, 16, 17, and 18 were tested by the t-test for means of independent samples. Hypotheses 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, and 30 were tested by Analysis of Variance. Hypothesis 31, 32 and 33 were tested by the t-test for means of independent samples.

Multivariate analyses was undertaken, parallel to hypotheses 10 to 33. These are as follows:

Hypothesis 34. There is no significant canonical correlation between a linear combination of the three stressors and a linear combination of the three MBI subscale scores. This hypothesis was tested by canonical correlation analysis.

Hypothesis 35. There is no linear combination of the three MBI subscale scores that significantly discriminates between male and female teachers.

Hypothesis 36. There is no linear combination of the three MBI subscale scores that significantly discriminates between teachers who are parents and teachers who are not.

Hypothesis 37. There is no linear combination of the three MBI subscale scores that significantly discriminates among teachers who are married, single, separated/divorced, or widowed.

Hypothesis 38. There is no linear combination of the three MBI subscale scores that significantly discriminates among teachers 21-30 years of age, teachers 31-40 years of age, teachers 41-50 years of age, and teachers 51 years of age and older.

Hypothesis 39. There is no linear combination of the three MBI subscale scores that significantly discriminates among elementary teachers, junior-high/middle-school teachers, and senior high-school teachers.

Hypothesis 40. There is no linear combination of the three MBI subscale scores that significantly discriminates among teachers who have been teaching 0-5 years, 6-15 years, 16-25 years and more than 26 years.

Hypothesis 41. There is no linear combination of the three MBI subscale scores that significantly discriminates between teachers who actively initiate coping strategies to alleviate stress and teachers who do not.

Hypotheses 35 through 41 were tested by discriminant analysis. All hypotheses were tested with alpha set at .05.

CHAPTER IV

RESULTS

Introduction

This research project was designed to evaluate the relationship between levels of stress found in regular education teachers in school districts with K-12 populations of less than 2,500 and sources of stress. The levels of stress were measured by the subscales, Emotional Exhaustion (EE), Depersonalization (DP), and Personal Accomplishment (PA), of the Maslach Burnout Inventory (MBI). Demographic variables included the teachers' gender, parental status, age, marital status, teaching assignment, and years of teaching experience. Stressors were identified by source–classroom-related issues, building-related issues, and community-related issues. This chapter presents a discussion of the sample and the results of the statistical analysis used to test the hypotheses.

Sample

The sample was comprised of regular education teachers working in school districts with a K-12 population of less than 2,500 in southwestern Michigan. There were 17 school districts which met the qualifications. Only 11 of the 17 superintendents who received the invitation to allow their staff members to participate in the study responded.

Eight hundred eleven packets were distributed to the 11 school districts. Table 3 gives the rate of return of the responses.

TABLE 3

RESPONSE RATE OF RETURN

School	Number of Teachers	Returned Responses	% of Total Returned
# 1	86	33	38.37
# 2	78	45	57.69
# 3	75	31	41.33
# 4	95	25	26.32
# 5	104	39	37.50
# 6	101	41	40.59
# 7	56	27	48.21
# 8	49	19	38.78
# 9	54	23	42.59
#10	48	26	54.17
#11	65	22	33.85
Total	811	331	40.81

Two of the returned packets had not been completed accurately and were not used in the study. Therefore, the data producing sample consisted of 329 teachers.

The demographic data are given in table form and a written description. Teachers' marital status in relationship to teaching assignment and gender are given in Table 4.

There were 155 elementary teachers in the sample. Of the 18 male teachers, 15 were married, 2 were divorced, and there was 1 no-response. Of the 137 female teachers, 10 were single, 109 were married, 14 were divorced, and 4 were widowed.

TABLE 4

MARITAL STATUS OF TEACHERS BY TEACHING ASSIGNMENT AND GENDER

Marital Status	Male	Female	Total
Elementary School Teachers			
Single	0	10	10
Married	15	109	124
Divorced	2	14	16
Widowed	0	4	4
No Response	1	0	1
Total	18	137	155
Junior-high/Middle-school Teachers			
Single	1	4	5
Married	27	39	66
Divorced	1	2	3
Widowed	0	3	3
No Response	0	0	0
Total	29	48	77
High-school Teachers			
Single	4	2	6
Married	42	35	77
Divorced	4	3	7
Widowed	1	2	3
No Response	0	0	0
Total	51	42	93
No Indication of Assignment			
No Response	2	2	4

There were 77 junior-high/middle-school teachers in the sample. Twenty-nine were males. One was single, 27 were married, and 1 was divorced. There were 48 female teachers. Four were single, 39 were married, 2 were divorced, and 3 were widowed.

Of the 93 high-school teachers, there were 51 males. Four were single, 42 were married, 4 were divorced, and 1 was widowed. The female sample consisted of 42 teachers. Of those, 2 were single, 35 were married, 3 were divorced, and 2 were widowed.

The demographic data of teachers' age in relationship to teaching assignment and gender are given in Table 5. Of the 18 males in the elementary school sample, 1 was in the 21-30 age range, 4 were in the 31-40 age range, 9 were in the 41-50 age range, and 4 were in the 51-plus age range. Of the 137 females, 21 were in the 21-30 age range, 35 were in the 31-40 age range, 43 were in the 41-50 age range, and 38 were in the 51-plus age range.

Twenty-nine of the 77 junior-high/middle-school teachers were males. Four were in the 21-30 age range, 4 were in the 31-40 age range, 10 were in the 41-50 age range, and 11 were in the 51-plus age range. There were 48 female teachers. Six were in the 21-30 age range, 7 were in the 31-40 age range, 25 were in the 41-50 age range, and 10 were in the 51-plus age range.

TABLE 5

AGE OF TEACHERS BY TEACHING ASSIGNMENT AND GENDER

Age	Male	Female	Total
Elementary Teachers			
21-30	1	21	22
31-40	4	35	39
41-50	9	43	52
51-plus	4	38	42
No Response	0	0	0
Total	18	137	155
Junior-high/Middle-school Teachers			
21-30	4	6	10
31-40	4	7	11
41-50	10	25	35
51-plus	11	10	21
No Response	0	0	0
Total	29	48	77
High-school Teachers			
21-30	9	5	14
31-40	9	9	18
41-50	18	16	34
51-plus	14	12	26
No Response	1	0	1
Total	51	42	93
No Indication of Assignment			
No Response	2	2	4

Fifty-one of the 93 high-school teachers were males. Nine were in the 21-30 age range, 9 were in the 31-40 age range, 18 were in the 41-50 age range, 14 were in the 51-plus age range, and there was 1 no-response. Of the 42 females in this teaching assignment category, 5 were in the 21-30 age range, 9 were in the 31-40 age range, 16 were in the 41-50 age range, and 12 were in the 51-plus age range.

The demographic data of teachers' parenting status in relationship to teaching assignment and gender are given in Table 6. Eighteen of the 155 elementary school teachers were males. Thirteen were parenting and 5 were not parenting. Of the 137 females in this sample, 79 were parenting and 58 were not parenting.

Twenty-nine of the 77 junior-high/middle-school teachers were males. Twenty-two were parenting and 7 were not parenting. Of the 48 females at this teaching assignment level, 30 were parenting, 17 were not parenting, and there was 1 no-response.

Fifty-one of the 93 high-school teachers were males. Thirty-two were parenting and 19 were not parenting. Of the 42 females at this teaching assignment level, 24 were parenting and 18 were not parenting.

The demographic data of teachers' years of teaching experience in relationship to teaching assignment and gender are given in Table 7. Of the 18 males at the elementary-school teaching assignment, 2 had 0-5 years of experience, 4 had 6- 15 years of experience, 9 had 16-25 years of experience, and 3 had 26-plus years of experience. Of the 137 females in the elementary school sample, 25 had 0-5 years of experience, 45 had 6-15 years of experience, 35 had 16-25 years of experience, and 32 had 26-plus years of experience.

TABLE 6

PARENTING STATUS OF TEACHERS BY TEACHING ASSIGNMENT AND GENDER

Parenting Status	Male	Female	Total
Elementary Teachers			
Parenting	13	79	92
Not Parenting	5	58	63
No Response	0	0	0
Total	18	137	155
Junior-high/Middle-school Teachers			
Parenting	22	30	52
Not Parenting	7	17	24
No Response	0	1	1
Total	29	48	77
High-school Teachers			
Parenting	32	24	56
Not Parenting	19	18	37
No Response	0	0	0
Total	51	42	93
No Indication of Assignment			
No Response	2	2	4

TABLE 7

YEARS OF TEACHING EXPERIENCE BY
TEACHING ASSIGNMENT AND GENDER

Years of Teaching Experience	Male	Female	Total
Elementary Teachers			
0-5	2	25	27
6-15	4	45	49
16-25	9	35	44
26-plus	3	32	35
No Response	0	0	0
Total	18	137	155
Junior-high/Middle-school Teachers			
0-5	3	8	11
6-15	5	9	14
16-25	9	19	28
26-plus	12	12	24
No Response	0	0	0
Total	29	48	77
High-school Teachers			
0-5	12	8	20
6-15	8	13	21
16-25	13	16	29
26-plus	18	5	23
No Response	0	0	0
Total	51	42	93
No Indication of Assignment			
No Response	2	2	4

There were 29 males in the sample of 77 junior-high/middle-school teachers. Three had 0-5 years of experience, 5 had 6-15 years of experience, 9 had 16-25 years of experience, and 12 had 26-plus years of experience. In the female sample of 48, 8 had 0-5 years of experience, 9 had 6-15 years of experience, 19 had 16-25 years of experience, and 12 had 26-plus years of experience.

Of the 93 high-school teachers, there were 51 males. Twelve had 0-5 years of experience, 8 had 6-15 years of experience, 13 had 16-25 years of experience, and 18 had 26-plus years of experience. In the female sample of 42 at this assignment level, 8 had 0-5 years of experience, 13 had 6-15 years of experience, 16 had 16-25 years of experience, and 5 had 26-plus years of experience.

Testing the Hypotheses

Appendix G contains the descriptive statistics on the six subscales.

All hypotheses were tested with alpha set at .05. The presentation of the data and the discussion of Hypotheses 1- 9 will be grouped together.

Hypothesis 1. There is no significant correlation between the degree of burnout as measured by the Emotional Exhaustion subscale of the MBI and scores on the SSCL related to classroom issues.

Hypothesis 2. There is no significant correlation between the degree of burnout as measured by the Depersonalization subscale of the MBI and scores on the SSCL related to classroom issues.

Hypothesis 3. There is no significant correlation between the degree of burnout as measured by the Personal Accomplishment subscale of the MBI and scores on the SSCL related to classroom issues.

Hypothesis 4. There is no significant correlation between the degree of burnout as measured by the Emotional Exhaustion subscale of the MBI and scores on the SSCL related to building issues.

Hypothesis 5. There is no significant correlation between the degree of burnout as measured by the Depersonalization subscale of the MBI and scores on the SSCL related to building issues.

Hypothesis 6. There is no significant correlation between the degree of burnout as measured by the Personal Accomplishment subscale of the MBI and scores on the SSCL related to building issues.

Hypothesis 7. There is no significant correlation between the degree of burnout as measured by the Emotional Exhaustion subscale of the MBI and scores on the SSCL related to community issues.

Hypothesis 8. There is no significant correlation between the degree of burnout as measured by the Depersonalization subscale of the MBI and scores on the SSCL related to community issues.

Hypothesis 9. There is no significant correlation between the degree of burnout as measured by the Personal Accomplishment subscale of the MBI and scores on the SSCL related to community issues.

Hypotheses 1-9 were tested by the product-moment correlation. Table 8 gives the correlation matrix for these variables.

With alpha = .05 and 327 degrees of freedom, the critical value of the correlation matrix coefficient is ± 0.108. Thus, seven of the nine correlation coefficients were statistically significant, though rather small. The two higher correlation coefficients were found between Classroom and Building Stressors and the Emotional Exhaustion subscale of the MBI, accounting for 23% and 14% of variance, respectively.

TABLE 8

CORRELATION MATRIX FOR HYPOTHESES 1-9

Stressor Source	Maslach Subscales		
	Emotional Exhaustion	Depersonalization	Personal Accomplishment
Classroom	0.479 *	0.235 *	-0.186 *
Building	0.370 *	0.256 *	-0.094
Community	0.174 *	0.113 *	-0.024

* significant coefficient.

The correlation between Classroom and Building Stressors and the Depersonalization subscale were lower, accounting for only 5.5% and 6.6% of variance, respectively. The only significant correlation involving Personal Accomplishment was the negative correlation with Classroom Stressors which accounted for only 3.5% of variance.

There is very little relationship between Community Stressors and the MBI subscales. The statistically significant correlations with the Emotional Exhaustion and Depersonalization subscales were very small, accounting for only 3% and 1.3% of variance, respectively. Therefore, Hypotheses 1, 2, 3, 4, 5, 7, and 8 were rejected, although Hypotheses 7 and 8 did not provide meaningful relationship information. Hypotheses 6 and 9 were retained.

Hypothesis 10. There is no linear combination of the stress scores related to classroom, building, and community stressors which yields a significant multiple correlation with the Emotional Exhaustion subscale of the MBI.

Hypothesis 10 was tested by multiple linear regression analysis, using the All Possible Subsets program of BMDP. The "best" subset included all three stressors.

The linear combination of classroom, building, and community stressor sources yielded a multiple correlation of 0.527 with Emotional Exhaustion ($R^2 = 0.278$). Table 9 gives the standardized coefficients and associated *t*-values for these variables.

Hypothesis 10 was rejected. There was a significant relationship between scores on the Emotional Exhaustion Subscale of the MBI and a linear combination of the degree of stress related to these sources. The greater the degree of stress related to classroom and building factors and the lower the stress related to community factors, the greater was the degree of emotional exhaustion. It should be noted that the correlation between Emotional Exhaustion and community stressors, taken alone was positive (Table 8). In Table 9, however, the loading for community stressors is negative. This is because

because the contribution of community stressors to the multivariate relationship is affected by its intercorrelations with the other two stressors.

TABLE 9

MULTIPLE LINEAR REGRESSION COEFFICIENTS OF CLASSROOM, BUILDING, AND COMMUNITY STRESSORS AND THE EMOTIONAL EXHAUSTION SUBSCALE

Variable	Standardized Coefficient	*t*	*p*
Classroom	0.458	7.87 *	0.00 *
Building	0.265	4.27 *	0.00 *
Community	-0.225	-3.63 *	0.00 *

* significant.

Hypothesis 11. There is no linear combination of the stress scores related to classroom, building, and community stressors which yields a significant multiple correlation with the Depersonalization subscale of the MBI.

Hypothesis 11 was tested by multiple linear regression analysis, using the All Possible Subsets program of BMDP. The "best" subsets included all three stressors. However, the *t* value associated with community was not significant. The analysis for the two predictors was, therefore, reported.

The linear combination of classroom and building stressors sources yields a multiple correlation of 0.282 with Depersonalization ($R^2 = 0.080$). Table 10 gives the standardized coefficients and associated *t*-values for these variables.

Hypothesis 11 was rejected. There is a significant relationship between these variables. The greater the degree of stress related to building and classroom factors, the greater was the degree of depersonalization.

TABLE 10

MULTIPLE LINEAR REGRESSION COEFFICIENTS OF CLASSROOM AND BUILDING STRESSORS AND THE DEPERSONALIZATION SUBSCALE

Variable	Standardized Coefficient	*t*	*p*
Classroom	0.139	2.23 *	0.026 *
Building	0.183	2.94 *	0.004 *

* significant.

Hypothesis 12. There is no linear combination of the stress scores related to classroom, building, and community stressors which yields a significant multiple correlation with the Personal Accomplishment subscale of the MBI.

Hypothesis 12 was tested by multiple linear regression analysis, using the All Possible Subsets program of BMDP. The "best" subset included all three stressors. However, the *t* values associated with building and community stressors were not significant. No combination of two stressors significantly predicted personal accomplishment. The zero-order correlation of classroom stressors and personal accomplishment was the only significant relationship, producing a correlation of -0.186 ($R^2 = 0.034$).

Hypothesis 12 was rejected. There was a significant relationship between these variables. The smaller the degree of stress related to classroom factors, the greater was the degree of personal accomplishment.

Hypothesis 13. There is no significant difference in the degree of burnout, as measured by the Emotional Exhaustion subscale of the MBI, between male and female teachers.

Hypothesis 14. There is no significant difference in the degree of burnout, as measured by Depersonalization subscale of the MBI, between male and female teachers.

Hypothesis 15. There is no significant difference in the degree of burnout, as measured by the Personal Accomplishment subscale of the MBI, between male and female teachers.

t tests were performed to analyze the difference between male and female teachers on the three subscales of the MBI. There were 100 male subjects and 229 female subjects in this study. The results of the *t* tests are given in Table 11.

Hypothesis 13 was retained. There was no significant difference between the mean scores of males and females on the Emotional Exhaustion subscale of the MBI.

Hypothesis 14 was rejected. A significant difference was found between males and females on the Depersonalization subscale of the MBI. The mean for females was significantly higher than the mean for males.

Hypothesis 15 was rejected. A significant difference was found between males and females on the Personal Accomplishment subscale of the MBI. The mean for female teachers was significantly higher than that for male teachers.

TABLE 11

COMPARISON OF MALES AND FEMALES
ON THE SUBSCALES OF THE MBI

Variables	Means		*t*	*p*
	Male	Female		
Emotional Exhaustion	23.140	24.275	0.88	0.380
Depersonalization	8.900	9.777	3.25	0.001 *
Personal Accomplishment	36.360	39.009	3.12	0.001 *

* significant.

Hypothesis 16. There is no significant difference in the degree of burnout, as measured by the Emotional Exhaustion subscale of the MBI, between teachers who are parenting and teachers who are not.

Hypothesis 17. There is no significant difference in the degree of burnout, as measured by the Depersonalization subscale of the MBI, between teachers who are parenting and teachers who are not.

Hypothesis 18. There is no significant difference in the degree of burnout, as measured by the Personal Accomplishment subscale of the MBI, between teachers who are parenting and teachers who are not.

t tests were performed to analyze the difference between teachers who were parenting (had children in their home) and teachers who were not on the three subscales of the MBI. One subject did not respond to this item, 202 indicated that they were

parenting, and 126 indicated that they were not. The results of the *t* tests are given in Table 12.

TABLE 12

COMPARISON OF TEACHERS' PARENTING STATUS ON THE SUBSCALES OF THE MBI

Variables	Means		*t*	*p*
	Parenting	Not Parenting		
Emotional Exhaustion	23.569	24.484	0.75	0.456
Depersonalization	7.327	7.587	0.41	0.675
Personal Accomplishment	38.807	37.167	2.17	0.031 *

* significant.

Hypothesis 16 was retained. There was no significant difference between the mean scores of teachers who were parenting and those who were not on the Emotional Exhaustion subscale of the MBI.

Hypothesis 17 was retained. There was no significant difference between the mean scores of teachers who were parenting and those who were not on the Depersonalization subscale of the MBI.

Hypothesis 18 was rejected. There was a significant difference between the mean scores of teachers who were parenting and those who were not on the Personal Accomplishment subscale of the MBI. The mean scores of teachers who were parenting were significantly higher than the mean scores of teachers who were not parenting.

Hypothesis 19. There is no significant difference in the degree of burnout, as measured by the Emotional Exhaustion subscale of the MBI, among teachers who are married, single, separated/divorced, or widowed.

Hypothesis 20. There is no significant difference in the degree of burnout, as measured by the Depersonalization subscale of the MBI, among teachers who are married, single, separated/divorced, or widowed.

Hypothesis 21. There is no significant difference in the degree of burnout, as measured by the Personal Accomplishment subscale of the MBI, among teachers who are married, single, separated/divorced, or widowed.

The means of the four groups on the three variables are given in Table 13. An analysis of variance test was conducted to analyze the difference between the four marital categories and the three subscales of the MBI. The results of this analysis are given in Table 14.

One teacher did not respond to this item, thus, the sample for this analysis consisted of 328 subjects. The analysis of variance indicated that there was a significant difference among the mean scores on the Emotional Exhaustion subscale of the MBI of teachers with different marital status categories. The Levene's Test for Homogeniety of Variance yielded $p = 0.82$. Thus, the assumption of homogeneity was tenable. A-posteriori tests were undertaken to determine which pairs of means were significantly different. As the conservative Scheffe test failed to indicate any significant pairwise

TABLE 13

MEANS AND STANDARD DEVIATIONS FOR MARITAL STATUS OF TEACHERS

Variable	Single $N=21$		Married $N=271$		Divorced $N=26$		Widowed $N=10$	
	Mean	*SD*	Mean	*SD*	Mean	*SD*	Mean	*SD*
Emotional Exhaustion	23.7	11.1	23.3	10.7	28.2	10.1	30.2	9.6
Depersonalization	8.1	5.0	7.2	5.5	7.2	5.7	11.5	5.1
Personal Accomplishment	35.6	6.3	38.4	6.6	39.2	7.4	35.3	8.4

TABLE 14

ANALYSIS OF VARIANCE OF TEACHERS' MARITAL STATUS ON THE SUBSCALES OF THE MBI

Source	*DF*	Sum of Squares	Mean Square	*F* Value	*p*
Emotional Exhaustion					
Between	3	994.72	331.57	2.91	0.035 *
Within	324	36901.75	113.89		
Depersonalization					
Between	3	193.62	64.54	2.19	0.09
Within	324	9567.25	29.53		
Personal Accomplishment					
Between	3	265.62	88.54	1.98	0.12
Within	324	14472.01	44.67		

differences, the pairwise *t* tests were used, as output by the BMPD7D program. The results indicated that only two pairs of means were significantly different. They were the comparison of married and divorced teachers and the comparison of married and widowed teachers. From Table 13, then, it is clear that the mean Emotional Exhaustion score of the married group of teachers was significantly lower than that of either the divorced or widowed groups. Hypothesis 19 was rejected.

A significant difference between the marital categories of the sample and the Depersonalization subscale of the MBI was not found. Therefore, Hypothesis 20 was retained.

A significant difference between the marital categories of the sample and the Personal Accomplishment subscale of the MBI was not found. Therefore, Hypothesis 21 was retained.

Hypothesis 22. There is no significant difference in the degree of burnout, as measured by the Emotional Exhaustion subscale of the MBI, among teachers 21-30 years of age, teachers 31-40 years of age, teachers 41-50 years of age, and teachers 51-plus years of age.

Hypothesis 23. There is no significant difference in the degree of burnout, as measured by the Depersonalization subscale of the MBI, among teachers 21-30 years of age, teachers 31-40 years of age, teachers 41-50 years of age, and teachers 51-plus years of age.

Hypothesis 24. There is no significant difference in the degree of burnout, as measured by the Personal Accomplishment subscale of the MBI, among teachers 21-30

years of age, teachers 31-40 years of age, teachers 41-50 years of age, and teachers 51-plus years of age.

An analysis of variance test was conducted to analyze the difference between the four age categories and each of the three subscales of the MBI. One teacher did not respond to this item, thus, the sample for this analysis consisted of 328 subjects. The data from this analysis are given in Tables 15 and 16.

A significant difference between age categories and the Emotional Exhaustion subscale of the MBI was not found. Therefore, Hypothesis 22 was retained.

A significant difference between age categories and the Depersonalization subscale of the MBI was not found. Therefore, Hypothesis 23 was retained.

A significant difference between age categories and the Personal Accomplishment subscale of the MBI was not found. Therefore, Hypothesis 24 was retained.

Hypothesis 25. There is no significant difference in the degree of burnout, as measured by the Emotional Exhaustion subscale of the MBI, among elementary teachers, junior-high/middle-school teachers, and senior high-school teachers.

Hypothesis 26. There is no significant difference in the degree of burnout, as measured by the Depersonalization subscale of the MBI, among elementary teachers, junior-high/middle-school teachers, and senior high-school teachers.

Hypothesis 27. There is no significant difference in the degree of burnout, as measured by the Personal Accomplishment subscale of the MBI, among elementary teachers, junior-high/middle-school teachers, and senior high-school teachers.

TABLE 15

MEANS AND STANDARD DEVIATIONS
FOR AGE OF TEACHERS

Variable	21-30 Yrs. $N = 46$		31-40 Yrs. $N = 69$		41-50 Yrs. $N = 123$		51-plus Yrs. $N = 90$	
	Mean	*SD*	Mean	*SD*	Mean	*SD*	Mean	*SD*
Emotional Exhaustion	23.8	9.7	23.1	10.9	25.1	10.9	23.0	11.3
Depersonalization	7.8	5.7	7.8	5.5	7.4	5.6	7.0	5.4
Personal Accomplishment	36.5	6.1	39.37	5.6	38.3	7.2	38.0	7.0

TABLE 16
ANALYSIS OF VARIANCE OF TEACHERS' AGE
ON THE SUBSCALES OF THE MBI

Source	*DF*	Sum of Squares	Mean Square	*F* Value	*p*
		Emotional Exhaustion			
Between	3	289.80	96.60	0.83	0.48
Within	324	37728.45	116.45		
		Depersonalization			
Between	3	30.13	10.04	0.33	0.81
Within	324	9944.65	30.69		
		Personal Accomplishment			
Between	3	217.65	72.55	1.62	0.18
Within	324	14504.00	44.77		

An analysis of variance test was conducted to analyze the difference among the three categories of teaching assignment and the three subscales of the MBI. Four teachers did not respond to this item, thus, the sample for this analysis consisted of 325 subjects. The data from this analysis are given in Tables 17 and 18.

A significant difference among teachers with different teaching assignments on the Emotional Exhaustion Subscale of the MBI was not found. Therefore, Hypothesis 25 was retained.

The analysis of variance indicated that there was a significant difference among teachers with different teaching assignments on the Depersonalization subscale of the MBI. The pairwise *t* tests as output by the BMDP7D program indicated that only two pairs of means were significantly different. Those were the comparison of elementary teachers and junior-high/middle-school teachers and elementary teachers and high-school teachers. From Table 17, then, it is clear that the Depersonalization mean score of elementary teachers was significantly lower than that of either junior-high/middle-school teachers or high-school teachers. Therefore, Hypothesis 26 was rejected.

The analysis of variance indicated that there was a significant difference among teaching assignments and the Personal Accomplishment subscale of the MBI. A-posteriori tests were undertaken to determine which pairs of means were significantly different. The results indicated that two pairs of means were significantly different. Those were for the comparison of elementary teachers and junior-high/middle-school

TABLE 17

MEANS AND STANDARD DEVIATIONS
FOR TEACHING ASSIGNMENTS

Variable	Elementary $N = 155$		Junior/Middle $N = 77$		High $N = 93$	
	Mean	*SD*	Mean	*SD*	Mean	*SD*
Emotional Exhaustion	24.1	10.9	23.9	10.3	23.8	11.1
Depersonalization	6.5	5.4	8.1	5.2	8.6	5.6
Personal Accomplishment	39.4	5.8	35.9	7.5	38.1	7.2

TABLE 18
ANALYSIS OF VARIANCE OF TEACHING ASSIGNMENT
ON THE SUBSCALES OF THE MBI

Source	*DF*	Sum of Squares	Mean Square	*F* Value	*p*
		Emotional Exhaustion			
Between	3	4.48	2.22	0.02	0.98
Within	322	37603.12	116.78		
		Depersonalization			
Between	3	290.27	145.14	4.86	0.01 *
Within	322	9610.75	29.85		
		Personal Accomplishment			
Between	3	620.51	310.26	7.11	0.001*
Within	322	14051.66	43.64		

teachers and junior-high/middle-school teachers and high-school teachers. From Table 17, then, it was clear that the Personal Accomplishment mean score of junior-high/middle-school teachers was significantly lower than that of either elementary or high-school teachers. Therefore, Hypothesis 27 was rejected.

Hypothesis 28. There is no significant difference in the degree of burnout, as measured by the Emotional Exhaustion subscale of the MBI, among teachers who have been teaching 0-5 years, 6-15 years, 16-25 years, and 26-plus years.

Hypothesis 29. There is no significant difference in the degree of burnout, as measured by the Depersonalization subscale of the MBI, among teachers who have been teaching 0-5 years, 6-15 years, 16-25 years, and 26-plus years.

Hypothesis 30. There is no significant difference in the degree of burnout, as measured by the Personal Accomplishment subscale of the MBI, among teachers who have been teaching 0-5 years, 6-15 years, 16-25 years, and 26-plus years.

An analysis of variance test was conducted to analyze the difference among the four categories of teacher's years of teaching experience and the three subscales of the MBI. The sample for this analysis consisted of 329 subjects. The data from this analysis are given in Tables 19 and 20.

The analysis of variance indicated that there was a significant difference among teachers with different years of teaching experience with respect to mean scores on the Emotional Exhaustion subscale of the MBI. A-posteriori tests were undertaken to determine which pairs of means were significantly different.

TABLE 19

MEANS AND STANDARD DEVIATIONS FOR YEARS OF TEACHING EXPERIENCE

Variable	0-5 Yrs. $N = 58$		6-15 Yrs. $N = 86$		16-25 Yrs. $N = 101$		26-plus Yrs. $N = 84$	
	Mean	*SD*	Mean	*SD*	Mean	*SD*	Mean	*SD*
Emotional Exhaustion	21.5	10.1	24.2	10.8	26.2	10.0	22.6	10.5
Depersonalization	7.4	4.9	7.8	5.9	7.6	5.8	6.8	5.3
Personal Accomplishment	37.7	6.4	38.7	6.1	38.7	6.9	37.5	7.2

TABLE 20

ANALYSIS OF VARIANCE OF YEARS OF TEACHING EXPERIENCE ON THE SUBSCALES OF THE MBI

Source	*DF*	Sum of Squares	Mean Square	*F* Value	*p*
		Emotional Exhaustion			
Between	3	1034.90	344.97	3.03	0.03 *
Within	325	36984.49	113.80		
		Depersonalization			
Between	3	43.85	14.61	0.48	0.70
Within	325	9960.43	30.65		
		Personal Accomplishment			
Between	3	108.18	36.06	0.80	0.49
Within	325	14647.18	45.07		

The Emotional Exhaustion mean score of teachers with 16-25 years of teaching experience was significantly higher than that of teachers with either 0-5 years of teaching experience or teachers with 26-plus years of teaching experience. Therefore, Hypothesis 28 was rejected.

A significant difference among the categories of years of teaching experience on the Depersonalization subscale of the MBI was not found. Therefore, Hypothesis 29 was retained.

A significant difference among the categories of years of teaching experience on the Personal Accomplishment subscale of the MBI was not found. Therefore, Hypothesis 30 was retained.

Hypothesis 31. There is no significant difference in the degree of burnout, as measured by the Emotional Exhaustion subscale of the MBI, between teachers who actively initiate coping strategies to alleviate stress and teachers who do not.

Hypothesis 32. There is no significant difference in the degree of burnout, as measured by the Depersonalization subscale of the MBI, between teachers who actively initiate coping strategies to alleviate stress and teachers who do not.

Hypothesis 33. There is no significant difference in the degree of burnout, as measured by the Personal Accomplishment subscale of the MBI, between teachers who actively initiate coping strategies to alleviate stress and teachers who do not.

t tests were performed on the three subscales of the MBI to analyze the difference between teachers who actively initiated coping strategies to alleviate their stress and those who did not. Sixteen subjects did not respond to this question, 287

indicated that they did initiate coping strategies, and 26 indicated that they did not. The results of the *t* tests are given in Table 21.

Hypothesis 31 was retained. No significant difference was found on the Emotional Exhaustion subscale of the MBI between the mean scores of teachers who actively initiated coping strategies and those who did not.

TABLE 21

t TESTS FOR COPING STRATEGIES BY TEACHERS ON THE SUBSCALES OF THE MBI

Variables	Means of Coping Strategies		*t*	*p*
	Initiate	Do Not Initiate		
Emotional Exhaustion	24.014	23.154	0.39	0.696
Depersonalization	7.293	5.497	1.85	0.065
Personal Accomplishment	38.348	6.672	1.46	0.145

Hypothesis 32 was retained. No significant difference was found on the Depersonalization subscale of the MBI between the mean scores of teachers who actively initiated coping strategies and those who did not.

Hypothesis 33 was retained. No significant difference was found on the Personal Accomplishment subscale of the MBI between the mean scores of teachers who actively initiated coping strategies and those who did not.

Multivariate analyses were undertaken, parallel to Hypotheses 10-33. The analysis of these eight hypotheses follows:

Hypothesis 34. There is no significant canonical correlation between a linear combination of the three stressors and a linear combination of the three MBI subscale scores. This hypothesis was tested by canonical correlation analysis.

The test of significance of the first canonical function yielded chi-square = 113.79 with 9 degrees of freedom and $p = 0.000$. Thus, this function was significant. The second and third functions were not significant. Table 22 gives the loadings of canonical variables on this function. A commonly used criterion is to describe the function in terms of those variables whose coefficients are at least half of the highest coefficient in the set. These are ranked in each set. The interpretation of the function was as follows: Those teachers with higher stress from classroom and community related factors tend to experience higher levels of Emotional Exhaustion and Depersonalization.

TABLE 22

CANONICAL VARIABLE LOADINGS

First Set – MBI Subscales	Loadings
Emotional Exhaustion	0.995 (1)
Depersonalization	0.537 (2)
Personal Accomplishment	-0.374
Second Set – Stressor Sources	**Loadings**
Classroom	0.703 (2)
Building	0.328
Community	0.906 (1)

Hypothesis 34 was rejected. There was a significant canonical correlation between a linear combination of the three stressors and a linear combination of the three MBI subscale scores.

Hypothesis 35. There is no linear combination of the three MBI subscale scores that significantly discriminates between male and female teachers.

This hypothesis and Hypotheses 36-41 were tested by discriminant analysis.

The test of significance of the one discriminant function yielded chi-square = 23.608 with 3 degrees of freedom and $p = 0.000$. Thus, this function was significant. Table 23 gives the standardized coefficients of the three variables on this function. Thus, Emotional Exhaustion and Personal Accomplishment (both positive) and Depersonalization (negative) define this function.

TABLE 23

STANDARDIZED DISCRIMINANT FUNCTION COEFFICIENTS BY GENDER

MBI Subscales	Coefficients by Gender
Emotional Exhaustion	0.71165 (2)
Depersonalization	-0.75185 (1)
Personal Accomplishment	0.56433 (3)

The means of the groups on this function, in descending order, were 0.181 for Females and - 0.414 for Males. See Figure 1. It should be noted that when univariate *t*

tests were conducted under Hypothesis 14 the female teachers scored significantly higher than the males teachers on the Depersonalization subscale. However, when the three subscales are taken together the coefficient for Depersonalization is negative. The interpretation of the discriminant function must be made only as a combination of the three variables. Thus, a randomly selected teacher with lower Depersonalization, higher Emotional Exhaustion and Personal Accomplishment subscale scores is more likely to be female than male. See Figure 1.

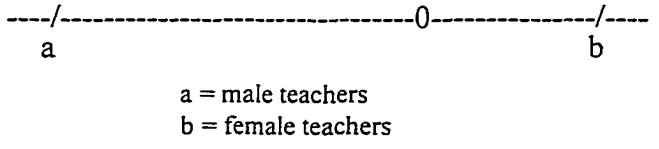


Figure 1. Discriminant functions evaluated at group means by gender.

Hypothesis 35 was rejected. There was a linear combination of the three MBI subscale scores that significantly discriminated between male and female teachers.

Hypothesis 36. There is no linear combination of the three MBI subscale scores that significantly discriminates between teachers who are parents and teachers who are not.

The test of significance of the one discriminant function yielded chi-square = 5.214 with 3 degrees of freedom and $p = 0.568$. Thus, Hypothesis 36 was retained. The linear combination of the three MBI subscale scores did not significantly discriminate between teachers who were parents and teachers who were not.

Hypothesis 37. There is no linear combination of the three MBI subscale scores that significantly discriminates among teachers who are married, single, separated/divorced, or widowed.

The test of significance of the first discriminant function yielded chi-square = 17.917 with 9 degrees of freedom and $p = 0.0362$. Thus, this function was significant. The second and third functions were not significant. Table 24 gives the standardized coefficients of the three variables on this function.

TABLE 24

STANDARDIZED DISCRIMINANT FUNCTION COEFFICIENTS BY MARITAL STATUS

MBI Subscales	Coefficients by Marital Status
Emotional Exhaustion	1.0306 (1)
Depersonalization	0.0220
Personal Accomplishment	0.4302 (2)

The means of the groups were, in descending order, 0.48312 for Divorced teachers, 0.43769 for Widowed teachers, -0.04807 for Married teachers, and -0.18627 for Single teachers. See Figure 2.

Thus, a randomly selected teacher with high Emotional Exhaustion and high Personal Accomplishment is more likely to be Divorced or Widowed than Married or Single.

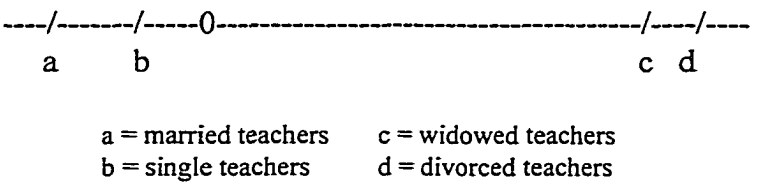


Figure 2. Discriminant functions evaluated at group means by marital status.

Hypothesis 37 was rejected. There was a linear combination of the three MBI subscale scores that significantly discriminated among teachers who were married, single, separated/divorced, and widowed.

Hypothesis 38. There is no linear combination of the three MBI subscale scores that significantly discriminates among teachers 21-30 years of age, teachers 31-40 years of age, teachers 41-50 years of age, and teachers 51-plus years of age.

The test of the first discriminant function yields chi-square = 10.916 with nine degrees of freedom and $p = 0.2815$. Thus, hypothesis 38 was retained. The linear combination of the three MBI subscale scores did not significantly discriminate among categories of teachers 21-30 years of age, teachers 31-40 years of age, teachers 41-50 years of age, and teachers 51-plus years of age.

Hypothesis 39. There is no linear combination of the three MBI subscale scores that significantly discriminates among elementary teachers, junior-high/middle-school teachers, and senior high-school teachers.

The test of significance of the first discriminant function yielded chi-square = 24.642 with 6 degrees of freedom and $p = 0.0004$. The second discriminant function

yielded chi-square = 6.896 with 2 degrees of freedom and $p = .032$. Thus, both functions were significant.

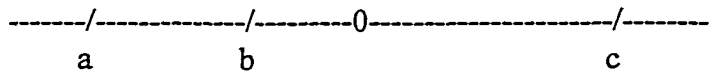
Table 25 gives the standardized coefficients of the three variables on both the first and second function. Emotional Exhaustion and Personal Accomplishment (both positive) and Depersonalization (negative) define the first function. Depersonalization and Personal Accomplishment (both positive) define the second function.

TABLE 25

STANDARDIZED DISCRIMINANT FUNCTION
COEFFICIENTS BY TEACHING ASSIGNMENT

MBI Subscales	Coefficients by Teaching Assignment	
	First Function	Second Function
Emotional Exhaustion	0.5253 (3)	-0.3061
Depersonalization	-0.5604 (2)	1.0799 (1)
Personal Accomplishment	0.7437 (1)	0.8425 (2)

The means of the groups on the first function were, in descending order, 0.238 for the elementary teacher group, -0.129 for the high-school teacher group, and -0.322 for the junior-high/middle-school teacher group. See Figure 3.

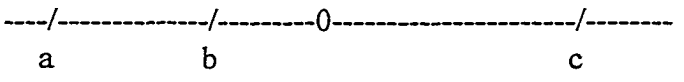


a. Junior-high/Middle-school Teachers
b. High-school Teachers
c. Elementary Teachers

Figure 3. Discriminant function #1 evaluated at group means by teaching assignment.

The means of the groups on the second function were, in descending order, 0.217 for the high-school teacher group, - 0.045 for the elementary teacher group, and - 0.172 for the junior-high/middle-school teacher group. See Figure 4.

According to the first function, a randomly selected teacher showing high Emotional Exhaustion and Personal Accomplishment and low Depersonalization is more likely to be an elementary teacher than either a high-school or a junior-high/middle-school teacher.



a = junior-high/middle-school teachers
b = elementary teachers
c = high-school teachers

Figure 4. Discriminant function #2 evaluated at group means by teaching assignment.

According to the second function, a randomly selected teacher showing high Depersonalization and Personal Accomplishment is more likely to be a high-school teacher than either an elementary teacher or a junior-high/middle-school teacher.

Hypothesis 39 was rejected. There was a linear combination of the three MBI subscale scores that significantly discriminated among elementary teachers, junior-high/middle-school teachers, and senior high-school teachers.

Hypothesis 40. There is no linear combination of the three MBI subscale scores that significantly discriminated among teachers who have been teaching 0-5 years, 6-15 years, 16-25 years and 26-plus years.

The test of significance of the first discriminant function yielded chi-square = 17.51 with 9 degrees of freedom and $p = 0.0413$. Thus, this function was significant. The second and third functions were not significant.

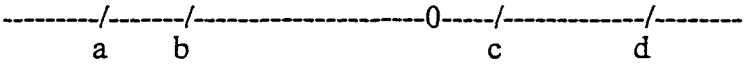
Table 26 gives the standardized coefficients of the three variables on this function. Thus, Emotional Exhaustion and Personal Accomplishment (both positive) define the function.

TABLE 26

STANDARDIZED DISCRIMINANT FUNCTION COEFFICIENTS BY YEARS OF TEACHING EXPERIENCE

MBI Subscales	Coefficients by Years of Teaching Experience
Emotional Exhaustion	0.9372 (1)
Depersonalization	0.0974
Personal Accomplishment	0.7088 (2)

The means of the groups on this function were, in descending order, 0.257 for the 16-25 years group, 0.084 for the 6-15 years group, -0.204 for the more than 25 years group, and -0.276 for the 0-5 years group. See Figure 5.



a = teachers with 0-5 years teaching experience
b = teachers with 26-plus years teaching experience
c = teachers with 6-15 years teaching experience
d = teachers with16-25 years teaching experience

Figure 5. Discriminant functions evaluated at group means by years of teaching experience.

Thus, a randomly selected teacher with high Emotional Exhaustion and high Personal Accomplishment, is more likely to be a teacher with 16-25 years or 6-15 years teaching experience than one 26-plus years or 0-5 years teaching experience. That is, the two groups in the middle range of years of teaching experience are more likely to have higher Emotional Exhaustion and Personal Accomplishment levels than those of the most experienced and the least experienced groups.

Hypothesis 40 was rejected. There was a linear combination of the three MBI subscale scores that significantly discriminated among teachers who have been teaching 0-5 years, 6-15 years, 16-25 years, and 26-plus years.

Hypothesis 41. There is no linear combination of the three MBI subscale scores that significantly discriminates between teachers who actively initiate coping strategies to alleviate stress and teachers who do not.

The test of the one discriminant function yielded chi-square = 6.142 with 3 degrees of freedom and $p = 0.1049$. Thus, Hypothesis 41 was retained. The linear combination of the three MBI subscale scores did not significantly discriminate between teachers who actively initiated coping strategies to alleviate stress and teachers who did not.

CHAPTER V

SUMMARY, FINDINGS AND DISCUSSION, IMPLICATIONS, AND RECOMMENDATIONS

Summary of the Study

Numerous studies have looked at the effect that job-related stress issues have on an individual's ability to productively carry out his/her job. The term burnout was first used by Fruedenberger (1974) to define the result of prolonged and extensive job-related stress on individuals. Individuals experiencing burnout are found to be unable to function effectively on the job. Burnout is associated with individuals who work in helping professions and, therefore, is a concern in the teaching profession. Burnout is the result of physical and mental exhaustion. Individuals experiencing burnout may become cynical, detached, and even isolate themselves from co-workers and withdraw from the individuals with whom they are working (Cherniss, 1980; Maslach, 1976; Maslach & Pines, 1977).

Much of the teacher/stress-related research has been conducted on subjects drawn from large city or suburban school districts. In this study, the sample was drawn from small, rural school districts with student populations of less than 2,500. The

subjects were regular-education teachers working with students from Kindergarten through 12th grade. The study attempted to answer the following questions:

1. Is the source of the stressor–classroom, building, or community–a factor in the level of burnout experienced?

2. Is a teacher's gender related to the level of burnout experienced?

3. Is a teacher's parenting experience related to the level of burnout experienced?

4. Is a teacher's marital status related to the level of burnout experienced?

5. Is a teacher's age related to the level of burnout experienced?

6. Is a teacher's teaching assignment–elementary, junior-high/middle-school, or senior-high school–related to the level of burnout experienced?

7. Is a teacher's years of experience related to the level of burnout experienced?

8. Do teachers who employ coping strategies have reduced stress levels?

Two instruments were used. The first, the Maslach Burnout Inventory (MBI), measured three components of burnout: Emotional Exhaustion, Depersonalization, and Personal Accomplishment. In general terms, Emotional Exhaustion and Depersonalization measure negative states–the higher the score, the more Emotional Exhaustion or Depersonalization a person is experiencing. Personal Accomplishment measures a positive state–the higher the score, the better a person is feeling about themselves in relation to their work. The second instrument, the Stressor Source Check List (SSCL), was designed for this study. The check list looked at the

sources of stress. Were higher levels of stress associated with classroom, building, or community stressors?

The sample consisted of 329 teachers. This met the criterion of a minimum sample size of 300 established by power analysis. Testing packets were distributed in early March 1998.

Findings and Discussion

Forty-one null hypotheses were tested. When appropriate, the findings and discussion are presented by grouping the hypotheses which address the three dependent variables in relationship to each of the independent or demographic variables.

Scores on the SSCL Related to Classroom Issues

Hypothesis 1. There is no significant correlation between the degree of burnout as measured by the Emotional Exhaustion subscale of the MBI and scores on the SSCL related to classroom issues.

Hypothesis 2. There is no significant correlation between the degree of burnout as measured by the Depersonalization subscale of the MBI and scores on the SSCL related to classroom issues.

Hypothesis 3. There is no significant correlation between the degree of burnout as measured by the Personal Accomplishment subscale of the MBI and scores on the SSCL related to classroom issues.

All three hypotheses were rejected. A significant relationship was found between the three MBI subscales and classroom issues. In order of highest to lowest, the correlations ranked Emotional Exhaustion, Depersonalization, and Personal Accomplishment.

In the measurement of the degree of burnout, the level of stress as measured by the Emotional Exhaustion and Depersonalization subscales may be offset by the degree to which individuals have positive feelings about the contribution they are making in their students' lives. It is these positive feelings that are measured by the Personal Accomplishment subscale (Maslach et al., 1996).

The results of Hypotheses 1, 2, and 3 suggest that there is a measurable level of stress related to the classroom setting (Emotional Exhaustion) which may lead to a degree of defensive emotional/psychological withdrawal from students (Depersonalization). The teachers may emotionally and/or psychologically distance themselves from students and peers in an effort to conserve the physical and emotional energy needed for the teaching task. However, there is also a high level of job satisfaction (Personal Accomplishment). The subjects in this study were able to maintain a sense of satisfaction from their teaching efforts in spite of experiencing stress to a degree which found them employing emotional defense mechanisms.

The SSCL consisted of a list of teacher-identified stressors items reflecting classroom, building, and community issue concerns. A Likert scale of 1 through 5 identifying a range of "no stress" through "severe stress" was used. As a Likert scale does not represent exact interval distances, median scores were calculated to rank the

items. Table 27 gives the classroom stressor items listed in order of most severe stress to least stress.

The first four stressors reflect issues concerning the teacher/student relationship and the potential for a positive outcome of the teaching process. These issues address the student's willingness to work with the teacher toward the goal of gaining an education.

TABLE 27

CLASSROOM STRESSOR MEDIANS

Classroom Stressors	Medians
Student low achievement when they have the ability	2.882
Student lack of pride in school work	2.808
Noisy classrooms	2.761
Student failure to comply with directions	2.722
High-risk students	2.637
Student cheating	2.618
Students' failure to attend to the teacher	2.602
Student squabbles	2.592
Amount of paper work	1.505
Student hyperactivity	1.358
Disruptive student behavior	1.218
Unmotivated students	1.053
Student lack of basic skills	0.728

Of the next group of four stressors, the first two, "high risk students" and "student cheating," reflect issues that are beyond the scope of school influence. They represent the individual student's personal experiences and value system. "Students' failure to attend to the teacher" and "student squabbles" are most likely to be student interpersonal relationship issues. Collectively, these behaviors impede the teaching process.

It is interesting to note that of the 13 classroom stressors, "disruptive student behavior" was ranked 11th by this sample of teachers from small-school districts. In a study by Feitler and Tokar (1982), a majority of teachers, 58%, stated that disruptive students were the number 1 cause of job-related stress. It was also noted by Needle et al. (1980) that discipline and violence are considered to be one of the sources of stress unique to teaching. If the stressor defined as "student squabbles" is equated with student violence, this sample of teachers ranked it 8th out of 13 suggesting that student disruptive behavior is not as significant a concern for this sample of teachers as the student's interest or lack of interest in participating in the learning process.

Student apathy is one area of similarity between the findings in the literature and this sample of small-school district teachers. High levels of student apathy were found to be a constant source of stress for teachers (Byrne, 1991; Farber & Miller, 1981; Pines & Aronson, 1989). Raschke et al. (1985) found that student apathy was a concern at all grade levels. However, it was particularly disturbing to note that 45% of Kindergarten and first-grade teachers ranked disinterested or uninvolved students as one of the five most stressful issues with which they must work.

Scores on the SSCL Related to Building Issues

Hypothesis 4. There is no significant correlation between the degree of burnout as measured by the Emotional Exhaustion subscale of the MBI and scores on the SSCL related to building issues.

Hypothesis 5. There is no significant correlation between the degree of burnout as measured by the Depersonalization subscale of the MBI and scores on the SSCL related to building issues.

Hypothesis 6. There is no significant correlation between the degree of burnout as measured by the Personal Accomplishment subscale of the MBI and scores on the SSCL related to building issues.

Of the three hypotheses concerned with the independent variable, building stressors, Hypotheses 4 and 5 were rejected. A significant correlation was found between building stressors and teachers' levels of Emotional Exhaustion and Depersonalization. The correlation value for Emotional Exhaustion was higher than the correlation value for Depersonalization.

These findings suggest that there is measurable stress (Emotional Exhaustion) in the teachers' relationship with building issues. The stress may be the direct result of dealing with specific building-related issues (number of meetings, need for more in-service time, etc.) or it may reflect the teachers' feelings that they are unable to have a decisive impact on a particular issue.

The teachers' reaction to this stress is to emotionally and/or psychologically withdraw (Depersonalization). Behaviors observed might include withdrawing from building-issue discussions, choosing to spend duty-free time in the classroom rather than with other adults, and expressing feelings of anger/hopelessness regarding building issues. In the face of diminishing emotional, psychological, and perhaps even physical reserves, teachers will instinctively focus on the teaching task.

Hypothesis 6 was retained. The correlation between building stressors and Personal Accomplishment was not significant. This lack of a significant correlation between building issues and the measurement of job satisfaction suggests that the subjects' positive feelings about their work comes from their relationship with the children they teach. Teachers believe that through their efforts they are making a difference in the classroom.

It is difficult for teachers to feel that they are able to have an impact on building issues. Building concerns are usually resolved by either administrative edicts or by time-consuming committee work. Neither of these solutions is particularly satisfying nor likely to give the same sense of personal accomplishment teachers find from their work in the classroom. From the literature it is noted that autonomy, the perceived need for authority, control, and influence, is directly related to a teacher's sense of job satisfaction (Kreis & Brockopp, 1986; Maslach & Pines, 1977; Pines et al., 1981).

In a study by Glasser (1980), 14 stressors were identified. Eleven of the stressors (79%) occurred beyond the immediate classroom experience and/or the instructional block of the day and were identified as having the potential to be as

demanding of a teacher's mental, emotional, and physical resources as the actual teaching task. In a similar review of the literature, Farber (1983) found that of 13 identified stressors, 77% were issues external to the direct teaching experience.

Table 28 gives the building stressor items listed in order of most severe stress to least stress. The teachers in this sample place far less significance on stressor issues related to building concerns than did the teachers noted in the literature where it has been found that pressures outside the classroom may have an even greater affect than

TABLE 28

BUILDING STRESSOR MEDIANS

Building Stressors	Medians
Number of meetings	1.798
Need for more in-service time	1.759
Sense of competitiveness between staff members	1.708
Differing educational philosophies	1.517
Work ethic variations among staff members	1.505
Workload inequities	1.505
Failure of staff members to share responsibilities	1.450
Staff interpersonal issues	1.393
Lack of communication with regard to student activities	1.391
Amount of paper work for the school district	1.384
Teacher isolation from peers	1.223
Lack of staff cooperation and support	1.117
Lack of staff consistency regarding school rules	0.862

classroom issues. In the literature sample, it was conditions of work rather than the experience of teaching which seemed to lead to job dissatisfaction and decisions to leave teaching (Kyriacou & Sutcliffe, 1979).

The first two stressors suggest that teachers are concerned about the amount of time they are compelled to spend away from their teaching and/or teaching preparation tasks and their wish for more training to assist them in their teaching. The next six issues all reflect peer relationship issues. These concerns may arise from the relative isolation in which teachers find themselves working. Maeroff (1988) and Mazur and Lynch (1989) noted that teachers spend all day with children and have very little adult contact with few opportunities for collegial interaction. Schonfeld (1990) noted that psychological symptom levels were found to be lower when colleague support was present.

Scores on the SSCL Related to Community Issues

Hypothesis 7. There is no significant correlation between the degree of burnout as measured by the Emotional Exhaustion subscale of the MBI and scores on the SSCL related to community issues.

Hypothesis 8. There is no significant correlation between the degree of burnout as measured by the Depersonalization subscale of the MBI and scores on the SSCL related to community issues.

Hypothesis 9. There is no significant correlation between the degree of burnout as measured by the Personal Accomplishment subscale of the MBI and scores on the SSCL related to community issues.

Of the three hypotheses concerned with the independent variable, community stressors, Hypotheses 7 and 8 were rejected. A significant correlation was found between community stressors and teachers' levels of Emotional Exhaustion and Depersonalization. The correlation value for Emotional Exhaustion was higher than the correlation value for Depersonalization. However, the correlation values, while significant, were very small. Hypothesis 9 was retained. The correlation between community stressors and Personal Accomplishment was not significant.

These findings are similar to the building-issue results. They suggest that, while teachers are concerned and/or even troubled by the public's view of the teaching profession, student issues and teaching-related issues have a greater impact on them. It was the classroom and the teaching process that created the greatest measurement for Emotional Exhaustion while community issues generated the least amount of Emotional Exhaustion. When Depersonalization was measured, community issues accounted for considerably lower levels of stress than classroom and building issues. This probably indicates that teachers have more control over their contact with the public.

The lack of significant findings between community stressors and teachers' sense of personal satisfaction is not surprising. The educational process is an easy target when the public expresses dissatisfaction. While commentary is rarely focused on individuals, teachers feel the effect of the criticism on their profession. Their efforts in the classroom often go unrecognized and unrewarded in the public arena.

The results of the rankings of the community stressors by medians are found in Table 29. The first three stressors concern issues in which teachers may well feel the

TABLE 29

COMMUNITY STRESSOR MEDIANS

Community Stressors	Median
Public perception that teachers work only 6 hours/day, 9 months/year	1.464
Belief that teachers are overpaid	1.325
Public airing of concerns about teaching	1.299
Belief that good education should be cheap	1.061
Perception that teachers are not professionals	1.055
Non-school personnel lack of understanding of current educational issues	1.000
Public perception that teaching is shallow and mindless work	0.941
Negative perception of schools	0.922
Uninformed public	0.854
Lack of recognition of the school's contribution to society	0.585
Negative perceptions about teachers	0.573
General lack of parental support	0.572
Special interest groups	0.506

most vulnerable to public opinion. The first stressor, the "public perception that teachers work only 6 hours/day, 9 months/year," is demeaning. Maeroff (1988) noted that because of an erroneous perception that teachers work only during the hours of their students' attendance, parents and taxpayers often view teachers as part-time employees. Thus the second stressor, the "belief that teachers are overpaid," would naturally follow in both the public perception and as a point of stress for teachers. It is not surprising that the third stressor in the order is the "public airing of concerns about teachers." This stressor

identifies the strain teachers are under when they find themselves in an indefensible position–any statements they make will appear to be self-serving and, therefore, would be considered invalid in the face of public opinion.

Linear Combination of Classroom, Building, and Community Issues and MBI Subscales

Hypothesis 10. There is no linear combination of the stress scores related to classroom, building, and community stressors which yield a significant multiple correlation with the Emotional Exhaustion subscale of the MBI.

This hypothesis was rejected. There was a significant correlation between the linear combination of classroom, building, and community stressors and the Emotional Exhaustion subscale of the MBI. The greater the level of stress related to classroom and building factors and the lower the level of stress related to community factors, the greater the degree of Emotional Exhaustion.

The linear combination of the three stressors did not yield results that are very different than those found by looking at the stressors individually. Clearly the classroom and building stressors correlate significantly with the measured level of Emotional Exhaustion. However, when the stressors are combined, the community stressors significantly impact the Emotional Exhaustion measurement negatively. This finding supports an earlier suggestion that the teacher's attention is focused on the teaching experience: first the classroom and then on the needed support from the

building. Thus, when the three stressors are combined, community issues are not a contributing factor to Emotional Exhaustion.

Hypothesis 11. There is no linear combination of the stress scores related to classroom, building, and community stressors which yield a significant multiple correlation with the Depersonalization subscale of the MBI.

This hypothesis was rejected. There is a significant correlation between the linear combination of classroom and building stressors and the Depersonalization subscale of the MBI. The higher the degree of stress related to classroom and building factors, the greater the degree of Depersonalization. These results reflect the pattern found in Hypothesis 10. When the three stressors are combined and teachers are faced with increasing stress, it is most likely going to be related to classroom and building issues. Thus, it is in the classroom and building areas that depersonalization as a defense mechanism is going to be manifested.

Hypothesis 12. There is no linear combination of the stress scores related to classroom, building, and community stressors which yield a significant multiple correlation with the Personal Accomplishment subscale of the MBI.

This hypothesis was rejected. There was a significant relationship between these variables. The smaller the degree of stress related to classroom factors, the greater the degree of Personal Accomplishment. Given that Personal Accomplishment is a positive measure of how one views work-related issues, it follows that lower stress would yield greater feelings of Personal Accomplishment.

Gender and MBI Subscales

Hypothesis 13. There is no significant difference in the degree of burnout, as measured by the Emotional Exhaustion subscale of the MBI, between male and female teachers.

Hypothesis 14. There is no significant difference in the degree of burnout, as measured by Depersonalization subscale of the MBI, between male and female teachers.

Hypothesis 15. There is no significant difference in the degree of burnout, as measured by the Personal Accomplishment subscale of the MBI, between male and female teachers.

Hypothesis 13 was retained. There was no significant difference in the degree of Emotional Exhaustion between male and female teachers. This finding from subjects teaching in small school districts is not supported by the literature. In their research, Byrne (1991) and Maslach and Jackson (1981) found that female teachers scored higher on the Emotional Exhaustion scale–feelings of frustration, fatigue, and stress–than male teachers.

Hypothesis 14 was rejected. There was a significant difference in the degree of Depersonalization between male and female teachers. Females scored significantly higher than males. This result is a contradiction of the findings reported in the literature where men have been found to have significantly higher scores than women on the Depersonalization scale–negative feelings toward students–for both frequency and intensity (Anderson & Iwanicki, 1984; Greenglass & Burke, 1988; Malanowski & Wood,

1984; Maslach & Jackson, 1981; Russell et al., 1987; Schwab & Iwanicki, 1982; Schwab et al., 1986).

Hypothesis 15 was rejected. There was a significant difference in the degree of Personal Accomplishment between male and female teachers. Females scored significantly higher than males. Byrne (1991) and Maslach and Jackson (1981) found the reverse: Male teachers scored higher than female teachers on the Personal Accomplishment subscale.

The differences noted between the three gender related hypotheses and the citations in the literature suggest a small-school effect. These findings may indicate that working in a small community in which the teachers may live in or nearby is significantly different from working in larger schools in larger communities. Anonymity might be a factor that could explain these differences. In a large community, teachers may come and go from their job much as workers in other professions do. They may not even live in or near the school community. Teachers in the large district are more likely to have a relationship with the school that is more job oriented. This may not be true for teachers in small school districts. They are more likely to live in the community. Their children may attend the district in which they teach and this puts the teachers in the dual role of employee and parent (with a consumer/tax payer's interest). In a small community they may be working with or for friends and/or lifelong acquaintances. Their students may include relatives and/or children of friends, school board members, and/or administrators or other teachers. These factors may considerably alter the dynamics of the teacher's role and thus contribute to the discrepancies noted.

In addition, while the sample size met the required number needed for data analysis, it is small in comparison to the samples cited in the literature. Further research or a replication of this study with a larger sample would be needed in order to have a better assessment of the findings.

Parenting and MBI Subscales

Hypothesis 16. There is no significant difference in the degree of burnout, as measured by the Emotional Exhaustion subscale of the MBI, between teachers who are parenting and teachers who are not.

Hypothesis 17. There is no significant difference in the degree of burnout, as measured by the Depersonalization subscale of the MBI, between teachers who are parenting and teachers who are not.

Hypothesis 18. There is no significant difference in the degree of burnout, as measured by the Personal Accomplishment subscale of the MBI, between teachers who are parenting and teachers who are not.

Hypotheses 16 and 17 were retained. There was no significant difference between the mean scores of teachers who were parenting and those who were not on the Emotional Exhaustion and Depersonalization subscales.

Hypothesis 18 was rejected. There was a significant difference between the mean scores of teachers who were parenting and those who were not on the Personal Accomplishment subscale. Teachers who were parenting scored significantly higher.

Parenting, while it suggests increased responsibility and demands on working parents, did not appear to add to the stress level of the parents in this sample. These findings were consistent with those found in the literature. Byrne (1991) and Maslach and Jackson (1985) found that levels of burnout (high Emotional Exhaustion and Depersonalization and low Personal Accomplishment) in childless couples were higher than that of couples with children. Parenting may give teachers a greater experience and understanding which they bring to their classroom. The findings further suggest that teachers who are also parents may experience personal satisfaction from observing student behaviors and accomplishments beyond those of academic achievement.

Marital Status and MBI Subscales

Hypothesis 19. There is no significant difference in the degree of burnout, as measured by the Emotional Exhaustion subscale of the MBI, among teachers who are married, single, separated/divorced, and widowed.

Hypothesis 20. There is no significant difference in the degree of burnout, as measured by the Depersonalization subscale of the MBI, among teachers who are married, single, separated/divorced, and widowed.

Hypothesis 21. There is no significant difference in the degree of burnout, as measured by the Personal Accomplishment subscale of the MBI, among teachers who are married, single, separated/divorced, and widowed.

Hypothesis 19 was rejected. A significant difference between two pairs of means on the Emotional Exhaustion subscale was found. The means of the married teachers were significantly lower than that of either the divorced or widowed groups.

Hypotheses 20 and 21 were retained. A significant difference between the marital catagories and the subscales of Depersonalization and Personal Accomplishment was not found.

Seventy-nine percent of the sample were married teachers. Thus, the single, divorced, and widowed teachers sample was very small. However, these results are similar to those of Maslach and Jackson (1981). They found marital status significantly related to Emotional Exhaustion but not to Depersonalization or Personal Accomplishment.

One frequently employed coping strategy is the sharing of problems with a friend (Alschuler, 1980). For married teachers, their spouse may be (depending on the quality of the marriage) the friend with whom they can share their problems and concerns. Also, for the married teachers, there is a natural separation between work and home. Single, divorced, and widowed teachers may spend inordinate amounts of time on school work and related activities until school becomes their family.

Age and MBI Subscales

Hypothesis 22. There is no significant difference in the degree of burnout, as measured by the Emotional Exhaustion subscale of the MBI, between teachers 21-30

years of age, teachers 31-40 years of age, teachers 41-50 years of age, and teachers 51-plus years of age.

Hypothesis 23. There is no significant difference in the degree of burnout, as measured by the Depersonalization subscale of the MBI, between teachers 21-30 years of age, teachers 31-40 years of age, teachers 41-50 years of age, and teachers 51-plus years of age.

Hypothesis 24. There is no significant difference in the degree of burnout, as measured by the Personal Accomplishment subscale of the MBI, between teachers 21-30 years of age, teachers 31-40 years of age, teachers 41-50 years of age, and teachers 51-plus years of age.

Hypotheses 22, 23, and 24 were retained. There was no significant difference in the degree of burnout as measured by the subscales of the MBI among teachers 21-30 years of age, teachers 31-40 years of age, teachers 41-50 years of age, and teachers 51-plus years of age.

Stress, as it relates to teacher age, has generated a number of studies. The following list briefly outlines the results:

1. Lowther et al. (1985) found job satisfaction for teachers increasing with age, and job rewards becoming more important.

2. Chapman and Lowther (1982) reported that leadership, accomplishment, and recognition had strong positive relationships to job satisfaction among experienced teachers.

3. Farber (1984) found teachers 34-44 years of age to be most at risk of burnout.

4. Friedman (1991) found age associated with levels of burnout. When characteristics of elementary schools with high and low levels of staff burnout were identified, the schools whose teachers were exhibiting high burnout levels were found to have more older teachers than schools whose teachers were exhibiting low burnout levels.

5. Feitler and Tokar (1982) found teachers 31-44 years of age reporting the highest level of stress.

6. Byrne (1991), Schwab et al. (1986), and Schwab and Iwanicki (1982) found teachers 20-39 years of age scoring significantly higher on the Emotional Exhaustion subscale. They also experienced significantly more intense feelings of exhaustion and fatigue than did teachers who were 50 years of age.

7. Anderson and Iwanicki (1984), Gold (1985), and Russell et al. (1987) found that, in general, younger teachers experienced more stress as measured by the Emotional Exhaustion and Depersonalization subscales of the MBI.

While there are inconsistencies found among these research studies, it is significant that, in contrast, this study of teachers from small school districts did not indicate any stress-related differences among the age groups.

Teaching Assignment and MBI Subscales

Hypothesis 25. There is no significant difference in the degree of burnout, as measured by the Emotional Exhaustion subscale of the MBI, among elementary teachers, junior-high/middle-school teachers, and senior-high-school teachers.

Hypothesis 26. There is no significant difference in the degree of burnout, as measured by the Depersonalization subscale of the MBI, among elementary teachers, junior-high/middle-school teachers, and senior-high-school teachers.

Hypothesis 27. There is no significant difference in the degree of burnout, as measured by the Personal Accomplishment subscale of the MBI, among elementary teachers, junior-high/middle-school teachers, and senior-high-school teachers.

Hypothesis 25 was retained. A significant difference in the degree of burnout, as measured by the Emotional Exhaustion subscale of the MBI, among elementary teachers, junior-high/middle-school teachers, and senior-high-school teachers was not found.

Hypothesis 26 was rejected. Elementary teachers' means were significantly lower than either junior-high/middle-school teachers or high school teachers on the Depersonalization subscale. A significant difference between junior-high/middle-school teachers or high-school teachers on the Depersonalization subscale was not found. These findings may reflect the pattern in teacher/student relationships which changes across the 5-18 year age span. From Kindergarten through 12th grade, teacher/pupil relationships change from being close, almost paternal in nature, to being more distant, formal, and

adult-like. The developmental pattern of children from 5 years of age through 18 years of age is marked by a significant shift in child/adult relationships at about the junior-high/middle-school years. These findings are not inconsistent with this developmental pattern.

Hypothesis 27 was also rejected. Elementary teachers' means were significantly higher than either junior-high/middle-school teachers or high-school teachers on the Personal Accomplishment subscale. However, the means for junior-high/middle-school teachers were significantly lower than the means for high-school teachers on the Personal Accomplishment subscale. These results also reflect the developmental stages of childhood through adolescence. The junior-high/middle-school years are marked by the emotional turmoil which accompanies puberty. The lower means for junior-high/middle-school teachers on the Personal Accomplishment subscale are not inconsistent with the developmental pattern of the students with whom they work.

These findings are consistent with the work of Farber (1984) who found that junior-high teachers in suburban and small towns (school size not noted) were most at risk of burnout. A number of studies (Anderson & Iwanicki, 1984; Malanowski & Wood, 1984; Schwab et al., 1986; Schwab & Iwanicki, 1982) found elementary teachers to have a higher sense of personal accomplishment when compared to junior-high and senior-high teachers. In another group of studies, researchers found the higher the grade level, the greater the stress (Feitler & Tokar, 1982; Gold, 1985; Malik et al., 1991). Thus, in the area of teaching assignment, there does not appear to be a discernable difference between cited literature findings (large school districts) and the small school district data.

Years of Experience and MBI Subscales

Hypothesis 28. There is no significant difference in the degree of burnout, as measured by the Emotional Exhaustion subscale of the MBI, between teachers who have been teaching 0-5 years, 6-15 years, 16-25 years, and 26-plus years.

Hypothesis 29. There is no significant difference in the degree of burnout, as measured by the Depersonalization subscale of the MBI, between teachers who have been teaching 0-5 years, 6-15 years, 16-25 years, and 26-plus years.

Hypothesis 30. There is no significant difference in the degree of burnout, as measured by the Personal Accomplishment subscale of the MBI, between teachers who have been teaching 0-5 years, 6-15 years, 16-25 years, and 26-plus years.

Hypothesis 28 was rejected. The mean score on the Emotional Exhaustion subscale of teachers with 16-25 years of teaching experience was significantly higher than that of teachers with either 0-5 years of teaching experience or teachers with over 25 years of teaching experience. Teachers in the 16-25 years of experience group are probably in their middle years. This finding may reflect that teachers in this group are finding the demands of teaching heightened by more demanding personal life experiences. Teachers in the 0-5 years of teaching experience tend to be enthusiastic and extremely focused on their teaching experience. It may be this high energy level that sees them through the more challenging times and helps to reduce their level of Emotional Exhaustion. Teachers with over 25 years of teaching experience have a wealth of experience to sustain them. The fact that they have remained in the teaching profession

for more than 25 years may imply that they have learned how to balance the demands of teaching with their personal levels of energy.

Hypotheses 29 and 30 were retained. Significant differences between years of teaching experience on the mean scores on the Depersonalization and Personal Accomplishment subscales were not found.

Schwab et al. (1986) found no significant link between number of years of experience and burnout among New Hampshire teachers. The findings in this study suggest that teachers from small school districts may demonstrate a stress pattern related to years of teaching experience.

MBI Subscales and Use of Coping Strategies

Hypothesis 31. There is no significant difference in the degree of burnout, as measured by the Emotional Exhaustion subscale of the MBI, between teachers who actively initiate coping strategies to alleviate stress and teachers who do not.

Hypothesis 32. There is no significant difference in the degree of burnout, as measured by the Depersonalization subscale of the MBI, between teachers who actively initiate coping strategies to alleviate stress and teachers who do not.

Hypothesis 33. There is no significant difference in the degree of burnout, as measured by the Personal Accomplishment subscale of the MBI, between teachers who actively initiate coping strategies to alleviate stress and teachers who do not.

Hypotheses 31, 32, and 33 were retained. No significant difference was found between teachers who initiated coping strategies and those who did not on the

subscales of the MBI. Of the 329 possible respondents, 287 teachers indicated that they used coping strategies to manage their stress. Twenty-six indicated that they did not employ coping strategies and 16 did not respond to this item. Due to the low number of subjects who indicated that they did not initiate coping strategies, it is difficult to draw meaningful conclusions as to the effect coping strategies had on the levels of Emotional Exhaustion, Depersonalization, and Personal Accomplishment experienced by the individuals in the two groups.

However, while the hypotheses were retained, it is interesting to note the teachers' responses to being asked to indicate the coping mechanisms they employed. The teachers were presented with eight coping-mechanism selections and then given the opportunity to write in other options (see Appendix A).

Of the volunteered responses, six were consistently mentioned. These were as follows: Spiritual (church/prayer), Set school issues aside for a short time, Take time to relax, Healthful living practices, Medical (chemical, doctor prescribed, or herbal), and Enjoy seasonal exercise. Table 30 gives the frequencies of the coping mechanisms the subjects indicated they used.

Talking with a friend was listed by 234 or 82% of the subjects, who indicated that they actively initiated coping strategies to deal with their stress. This supports the literature recommendations by Farber (1983) and Farber and Miller (1981) that creating a "psychological sense of community" among teachers enhances an atmosphere conducive to increasing teacher communication thereby reducing the sense of isolation and supporting effective coping mechanisms.

TABLE 30

COPING MECHANISM FREQUENCIES

#	Coping Mechanism	Frequency
1	Talk with a friend	234
2	Identify the source of the stress	202
3	Take time for hobbies	161
4	Exercise regularly	156
5	Set more realistic priorities	132
6	Reevaluate goals	127
7	Share work load with others at home	100
8	Share work load with others at school	68
9	Take time to relax	38
10	Set school issues aside for a short time	34
11	Spiritual (church/prayer)	31
12	Healthful living practices	16
13	Medical (chemical, doctor prescribed or herbal)	13
14	Enjoy seasonal exercise	10

Maslach (1982a) suggested that teachers learn to work smarter. She suggests that teachers can reduce stress by making changes in routines (coping mechanisms 7 and 8), setting realistic, specific goals (coping mechanisms 5 and 6), learning to do things differently, and taking breaks when needed (coping mechanisms 3, 4, 9, 10, and 14). Pines and Kafry (1982) studied coping techniques and identified four coping-strategy types.

1. Direct-active coping. Individuals attempt to take control of the source of stress. They change the source of the stress, confront the source of stress in an effort to limit its effect, and study the situation to find positive aspects.

2. Direct-inactive coping. An example of individuals using this coping mechanism includes attempting to ignore or avoid the source of stress to the point of even leaving the stressful situation.

3. Indirect-active coping. Examples of this type include individuals talking with others about the source of stress, changing themselves to adapt to the source of stress, or getting involved in other activities.

4. Indirect-inactive coping. Individuals using this coping strategy may use drinking or drugs to find release from their stress. They may also become ill or mentally and/or physically collapse.

Of the 14 coping mechanisms listed in this study, 13 are active coping mechanisms. Coping mechanisms 2, 5, 6, and 8 meet the criteria identified as direct-active coping. Coping mechanisms 1, 3, 4, 7, 9, 10, 11, 12, and 14 meet the criteria identified as indirect-active coping. While it is not as clear, coping mechanism 13, medical (chemical, doctor prescribed or herbal), probably would fit the indirect-active coping category as these subjects are either seeking medical treatment or self-medicating using herbal remedies, which does not fit the indirect-inactive coping mechanism category. These findings suggest that the subjects of this study not only recognize that they are experiencing stress, but they are also actively seeking relief.

Classroom, Building, and Community Stressors and a Linear Combination of the MBI Subcales

Hypothesis 34. There is no significant canonical correlation between a linear combination of the three stressors and a linear combination of the three MBI subscale scores.

A significant canonical correlation between a linear combination of the three stressors and a linear combination of the three MBI subscale scores was found. Hypothesis 34 was rejected. Teachers with higher stress from classroom and community related factors tend to experience higher levels of Emotional Exhaustion and Depersonalization. These results suggest that teachers' attitudes toward their profession are affected by sources of stress in the work environment, particularly classroom and community issues.

Demographic Variables and a Linear Combination of the MBI Subcales

Hypothesis 35. There is no linear combination of the three MBI subscale scores that significantly discriminates between male and female teachers.

Hypothesis 35 was rejected. There was significant discrimination between male and female teachers when the Emotional Exhaustion, Depersonalization, and Personal Accomplishment subscale scores were linearly combined. For female teachers, the linear combination yielded a higher coefficient for Emotional Exhaustion. This was balanced by a higher coefficient for Personal Accomplishment and a negative coefficient for Depersonalization. Thus, while female teachers are significantly more stressed

(Emotional Exhaustion) than male teachers from their work, they experience higher levels of satisfaction (Personal Accomplishment), are less likely to psychologically distance themselves from students and peers (Depersonalization), and thus, their risk of burnout is reduced. The results of the linear combination suggested that female teachers are able to assess the progress they are making with their students which helps them keep an overall positive view of their work.

Hypothesis 36. There is no linear combination of the three MBI subscale scores that significantly discriminates between teachers who are parents and teachers who are not.

Hypothesis 36 was retained. A significant discrimination between teachers who are parents and teachers who are not was found when the Emotional Exhaustion, Depersonalization, and Personal Accomplishment subscale scores were linearly combined.

When the MBI subscale scores were looked at independently of each other, there was a significant difference found in the Personal Accomplishment subscale. The results of the linear combination suggest that the rewards and demands of parenting do not significantly impact teachers' work experience and, thus, they are neither more likely or less likely to approach burnout.

Hypothesis 37. There is no linear combination of the three MBI subscale scores that significantly discriminates among teachers who are married, single, separated/divorced, or widowed.

Hypothesis 37 was rejected. There was significant discrimination among teachers who were married, single, separated/divorced, or widowed when the Emotional Exhaustion, Depersonalization, and Personal Accomplishment subscale scores were linearly combined. When the MBI subscales were considered independently, the only significance was noted in the Emotional Exhaustion subscale with married teachers having significantly lower levels of stress. The results of the linear combination indicated that a randomly selected teacher with high Emotional Exhaustion and high Personal Accomplishment is more likely to be divorced or widowed than married or single. These findings suggest that teachers who have experienced the loss of a significant person in their lives may be more vulnerable to the demands and related stresses inherent in the teaching profession. However, the high level of Personal Accomplishment may balance the high level of Emotional Exhaustion and thus reduce the risk of burnout for divorced and widowed teachers.

Hypothesis 38. There is no linear combination of the three MBI subscale scores that significantly discriminates among teachers 21-30 years of age, teachers 31-40 years of age, teachers 41-50 years of age, and teachers 51-plus years of age.

Hypothesis 38 was retained. A significant discrimination among teachers 21-30 years of age, teachers 31-40 years of age, teachers 41-50 years of age, and teachers 51-plus years of age was not found when the Emotional Exhaustion, Depersonalization, and Personal Accomplishment subscale scores were linearly combined. These results were consistent with those found when the MBI subscales were considered independently in

relationship to teacher age classifications. Thus, age was not a factor that was going to increase or decrease a teacher's likelihood of experiencing burnout.

Hypothesis 39. There is no linear combination of the three MBI subscale scores that significantly discriminates among elementary teachers, junior-high/middle-school teachers, and senior-high-school teachers.

Hypothesis 39 was rejected. There was significant discrimination among elementary teachers, junior-high/middle-school teachers, and senior-high-school teachers when the Emotional Exhaustion, Depersonalization, and Personal Accomplishment subscale scores were linearly combined. This linear combination yielded two discriminant functions. The first function was a combination of Emotional Exhaustion and Personal Accomplishment, both with positive coefficients, and Depersonalization yielding a negative coefficient which was consistent with the results when the MBI scales were considered independently in relation to teaching assignments. Thus, according to the first function, a randomly selected teacher showing high Emotional Exhaustion and Personal Accomplishment and low Depersonalization is more likely to be an elementary teacher than either a high-school or a junior-high/middle-school teacher. Considering that the majority of elementary teachers in this sample are female (88%), these findings are consistent with the gender findings. Furthermore, these findings may also reflect the developmental levels of the students across the Kindergarten to 12th-grade teaching span. See the discussion of Hypotheses 25, 26, and 27 above.

The second discriminant function combined high Depersonalization and Personal Accomplishment. According to this function, a randomly selected teacher

showing high Depersonalization and Personal Accomplishment is more likely to be a high-school teacher than either an elementary teacher or a junior-high/middle-school teacher. These results may also strongly reflect student developmental issues. The high-school student/teacher relationship is marked by a considerable adult-like formality which may be reflected in more distancing behaviors (Depersonalization) on the part of the teacher. From the Personal Accomplishment perspective, with each course completed the student is moving toward both the student's and teacher's ultimate goal–graduation. The teacher does not need to have personal feedback from students. Successful completion of a course is a measurement of teacher success.

Elementary teachers have closer personal relationships with their students as a result of the students' developmental issues and, therefore, distancing themselves from their students is not a natural occurrence. Personal Accomplishment, while high for female teachers, in relationship to teaching assignment is less of a factor. This suggests that in terms of goals, the elementary teachers are looking at short-term goals which, once achieved, are quickly replaced with the next goal. Thus, they are likely to find themselves always looking ahead to the next task and their successes are less sustaining on a day-to-day basis.

Junior-high/middle-school teachers experienced the lowest levels of Depersonalization and of Personal Accomplishment as compared to elementary and high-school teachers. The developmental issues surrounding the junior-high/middle-school student must be considered a significant factor in these findings. For the junior-high/middle-school students these years are filled with emotional and physical

challenges. It is difficult for teachers to assess progress (and therefore achieve a measure of Personal Accomplishment) as the students' they are dealing with are experiencing rapid and often discontinuous mood swings driven by hormone fluctuations. Frequently, school achievement is the least of the student's concerns and as a result receives little of his/her intellectual and emotional attention.

Developmental issues may also explain the lower level of Depersonalization. Junior-high/middle-school students are on their way to adulthood, but at this stage of their lives their progress is marked with reversals and sometimes may appear to cease for sustained periods of time. The ranking of levels of Depersonalization may reflect the position junior-high/middle-school teachers find themselves in–working with individuals who move rapidly from child-like to adult-like behaviors.

Hypothesis 40. There is no linear combination of the three MBI subscale scores that significantly discriminates among teachers who have been teaching 0-5 years, 6-15 years, 16-25 years, and 26- plus years.

Hypothesis 40 was rejected. There was a significant discrimination among teachers who have been teaching 0-5 years, 6-15 years, 16-25 years, and 26- plus years when the Emotional Exhaustion, Depersonalization, and Personal Accomplishment subscale scores were linearly combined. The linear combination found a discrimination based on high Emotional Exhaustion and high Personal Accomplishment. The two middle groups (16-25 and 6-15 years of teaching) experienced higher levels of Emotional Exhaustion and Personal Accomplishment than teachers with 26-plus years of experience or 0-5 years of experience. These findings are not consistent with the results of

considering MBI subscales separately which indicated significantly higher levels of Emotional Exhaustion for the 16–25 age group. For these teachers in the middle years of their career, the linear combination suggests that while they are experiencing high levels of stress, their positive view of their teaching accomplishments balances their levels of stress and thus, reduces their risk of burnout.

Hypothesis 41. There is no linear combination of the three MBI subscale scores that significantly discriminates between teachers who actively initiate coping strategies to alleviate stress and teachers who do not.

Hypothesis 41 was retained. A significant discrimination between teachers who actively initiate coping strategies to alleviate stress and teachers who do not was not found when the Emotional Exhaustion, Depersonalization, and Personal Accomplishment subscale scores were linearly combined. These findings are consistent with the results from considering the MBI subscales separately. The small number of subjects who indicated that they did not initiate coping strategies makes it difficult to draw meaningful conclusions from this data.

Conclusions

From an analysis of the findings, the following conclusions were drawn:

1. Classroom, building, and community issues affected teachers' attitudes toward their profession. Teachers' stress levels, as measured by the MBI, are reflected in their identification of sources of stress in the work environment. Classroom issues had the

most significant effect on teachers' stress levels, followed by building issues, with community issues having the least effect on teachers' overall level of stress.

2. A teacher's gender was related to the risk of burnout. Female teachers were less likely to experience burnout than were male teachers.

3. There was no difference in the risk of burnout related to whether or not teachers were also parents.

4. A teacher's marital status was related to the risk of burnout. While divorced and widowed teachers were more vulnerable to the stresses associated with their teaching profession than were married or single teachers, their higher levels of stress were balanced by a higher sense of personal accomplishment, thus, reducing their risk of burnout.

5. Age was not found to be a factor related to the risk of burnout.

6. A teacher's teaching assignment–elementary, junior-high /middle-school, or senior-high-school–was related to the risk of burnout. Elementary teachers were less likely to experience burnout than were high-school teachers, and junior-high/middle-school teachers were more likely to experience burnout than either of the other two groups.

7. A teacher's years of experience were related to the risk of burnout. Teachers with 6-15 and 16-25 years of teaching experience were less likely to experience burnout than were teachers with 0-5 and 26-plus years of teaching experience.

8. Employment of coping strategies was not found to be related to reduced levels of stress.

Implications

In this study, experiencing stress to the point of burnout in the teaching profession was examined from four perspectives. First, the dynamic of the teaching environment was considered–classroom, building, and community issues which directly impact the teaching experience. Second, teacher demographics of gender, parenting experience, age, marital status, grade level taught, and years of experience were considered. Third, the question of whether or not teachers were acknowledging the stress in their lives and actively working to reduce the levels of stress was addressed. Finally, the question of whether the findings of this study were unique to school districts with fewer than 2,500 students was considered.

This study indicates that the greatest source of stress for teachers was related to classroom issues. The most significant stressors were associated with students' poor attitude toward the learning process and/or lack of concern for their personal accomplishments in the classroom. While building issues ranked second to classroom issues, the first two building issues cited may be instrumental in addressing classroom issues. At first, "number of meetings" and "need for more in-service time" may seem to be contradictory. However, the teachers in this study may be indicating that while they resent the time taken from their primary interest–working with students–they do need help in finding ways to address teaching concerns. More meaningful in-service time would be welcome. Many of the remaining building issues reflect concerns with interpersonal staff issues. These may best be addressed through staff/building-designed

coping strategies. The reduction of building stressors should have a positive impact on the classroom.

Patterns of stress levels in which the potential for teachers being at risk of burnout (linear combinations of Emotional Exhaustion, Depersonalization, and Personal Accomplishment) were reflected in the demographics of gender, marital status, grade level taught, and years of experience. Teaching is a stressful profession and it was not surprising to find that the points of vulnerability in the workplace parallel personal developmental and/or life issues. When stress as a measurement of Emotional Exhaustion was looked at independently, issues of concern for the level of stress experienced were found in the areas of marital status and years of teaching experience. While the linear combination findings suggest that high stress levels may be balanced by a sense of personal accomplishment, there remains a concern for the impact significant levels of stress are having on teachers. In this study it was found that the beginning and end of one's teaching career is likely to be more stressful than the middle years. Also, divorced and widowed teachers experienced more stress than their single and married peers, which suggests that significant losses in life may make one more vulnerable to stress. These are not factors which can be changed; however, they are points in life at which individuals may be supported by a school district's awareness of the possibility of increased vulnerability to stress in teachers' lives.

Mentors for beginning teachers may relieve some of the stress inherent with first-time teaching experiences. For the older teacher, developing teaching assignments which utilize their wealth of teaching experience and draw on individual strengths may

circumvent some of the mounting stress that comes with a demanding task and waning physical and/or emotional energy.

Encouraging teachers to develop a life outside of school is often not seen as a school district's focus. In fact, the school district has a vested interest in having teachers spend more time on school activities because the more time a teacher puts into the teaching task, the more benefits both the district and the students appear to reap. However, in the case of the divorced or widowed teacher, excessive time spent on school tasks may be filling a personal void but at the cost of increased stress. A delicate balance is needed to support teacher efforts while making it known that excessive efforts may be taking a toll on emotional, and perhaps even physical, resources. Finding a way to address these issues is going to be critical if a school district wishes to actively assist teachers in taking a healthful approach to balancing their teaching career and crises in their personal lives.

The most frequently identified coping strategy was "talking with a friend." Within the building and district administrative structure, there needs to be an acknowledgment that communication among peers will benefit everyone. It will, obviously, give relief through being able to share frustrations. In addition, it will help to break the sense of isolation teachers feel when they spend so much time away from other adults. This is, of course, an inherent problem in teaching, but it could be actively addressed. The students and the overall curriculum will benefit from giving teachers more opportunity to come together, share their experiences, and talk about strategies that work.

This study did not clearly find stress-related issues that were unique to school districts with fewer than 2,500 students. However, three points of variation from the literature were noted. First, the subjects in this sample placed less significance on stressor issues related to building concerns than did the teachers noted in the literature.

Second, differences were noted between the three gender-related hypotheses and the citations in the literature. The findings from this study may suggest that working in a small community in which the teachers may live in or nearby is significantly different from working in larger schools in larger communities. This was seen in the affect that stress had on female and male teachers in the smaller school districts. There are both positive and negative factors associated with the anonymity of working in a large school system just as there are from the sense of belonging that comes with working in a smaller community.

Finally, the findings in this study suggest a small school district effect noted in stress patterns related to years of teaching experience. No such effect was found in the literature. Thus, it would seem that there are differences in patterns of stress between teachers employed in large school districts and teachers who work in small school districts.

Recommendations for Further Study

The following recommendations for further study are proposed based on the findings and conclusions of this research:

1. Additional research to evaluate the level of stress in teachers who live in the

small community as opposed to those who live outside of the community would assist in further evaluating the effect of community stressors on teachers.

2. A study should focus on the development of a district-wide program designed to impact teacher stress. The program may give consideration to issues of stressor sources as well as look at developmental factors and/or life crises that may impact individuals' professional lives.

3. Further investigation should be made into the gender differences as identified by the MBI. This research could address such questions of how female and male teachers evaluate their success as teachers and what personality characteristics might lead to choosing to prepare for an elementary, junior-high/middle-school, or high-school position.

APPENDIX

APPENDIX A

DEMOGRAPHIC INFORMATION AND COPING MECHANISMS

Demographic Information

Gender: Male _____ Female _____

Marital Status: Single _____ Married _____

Divorced _____
Widowed _____

Age: 21 - 30 _____ 31 - 40 _____
41 - 50 _____ 51 plus _____

Parenting: Do you have children currently living in your home (biological, step-, or adopted)?

Yes _____ No _____

If yes please give their ages: _____

Grade Assignment: Elementary _____ Junior High/Middle _____

High School _____

Years of Teaching Experience: 0 - 5 _____ 6 - 15 _____

16 - 25 _____ 26 plus _____

Coping Mechanisms

What point on the following continuum most accurately indicates the level of stress you have experienced during the past month?

1	2	3	4	5
No stress		Moderate stress		Severe stress

When you feel stressed do you take action to reduce your stress? Yes _____ No _____
If you responded yes, please check as many of the following coping mechanisms which apply to you.

- ☐ Identify the source of stress
- ☐ Talk with a friend
- ☐ Reevaluate goals
- ☐ Exercise regularly
- ☐ Take time for hobbies
- ☐ Share work load with others at home
- ☐ Share work load with others at school
- ☐ Set more realistic priorities

Other coping mechanisms_____

_____

APPENDIX B
MASLACH BURNOUT INVENTORY

Educators Survey

HOW OFTEN:	0	1	2	3	4	5	6
	Never	A few times a year or less	Once a month or less	A few times a month	Once a week	A few times a week	Every day

HOW OFTEN 0-6	Statements:
1. _____	I feel emotionally drained from my work.
2. _____	I feel used up at the end of the workday.
3. _____	I feel fatigued when I get up in the morning and have to face another day on the job.
4. _____	I can easily understand how my students feel about things.
5. _____	I feel I treat some students as if they were impersonal objects.
6. _____	Working with people all day is really a strain for me.
7. _____	I deal very effectively with the problems of my students.
8. _____	I feel burned out from my work.
9. _____	I feel I'm positively influencing other people's lives through my work.
10. _____	I've become more callous toward people since I took this job.
11. _____	I worry that this job is hardening me emotionally.
12. _____	I feel very energetic.
13. _____	I feel frustrated by my job.
14. _____	I feel I'm working too hard on my job.
15. _____	I don't really care what happens to some students.
16. _____	Working with people directly puts too much stress on me.
17. _____	I can easily create a relaxed atmosphere with my students.
18. _____	I feel exhilarated after working closely with my students.
19. _____	I have accomplished many worthwhile things in this job.
20. _____	I feel like I'm at the end of my rope.
21. _____	In my work, I deal with emotional problems very calmly.
22. _____	I feel students blame me for some of their problems.

(Administrative use only)		cat.		cat.		cat.
	EE: _____	_____	DP: _____	_____	PA: _____	_____

APPENDIX C
TEACHER REQUEST FOR STRESSOR ITEMS

June 5, 1995

Dear BSPS Teacher:

I have reached the point in my dissertation research where current information is needed. My research topic addresses the issue of teacher stress in the range from manageable to burnout, the sources of teacher stress and implementation of coping strategies. My next step will be to develop a stressor source measurement scale. To do this I need to start with a list of stressors generated by teachers who are currently working in the teaching profession, Kindergarten through 12th grade.

I know what a busy time of the year this is. If you would be willing to take a few minutes to respond, I would greatly appreciate your input. The only identification need is by grade level taught--elementary, middle school or high school. I will leave an envelope for the forms in the office. Please cross your name off the list when you place your form in the envelop. I will pick them up Friday. If you have any questions you can reach me at the high school, extension 233 or at home, 471-7810.

Thank you for your help with this project.

Sincerely,

Roberta Farwell

Grade Level, please check: ____ Elementary

____ Middle School

____ High School

This research is looking at stressors related to teaching. For the purpose of this study three sources of stressors will be considered, classroom, building and community. The following parameters apply:

> Classroom Stressors: Stress which is directly related to your classroom structure/function and/or your relationship with your students.
>
> Building Stressors: Stress which is directly related to issues beyond your classroom but is associated with the building structure/management.
>
> Community Stressors: Stress which is directly related to issues generated by individuals who are not part of the Berrien Springs Public Schools team.

Please identify three sources of stress for each area:

Classroom:

1.

2.

3.

Building:

1.

2.

3.

Community:

1.

2.

3.

APPENDIX D

JUDGES' STRESSOR SOURCE CHECK LIST

Judging Instructions

This research is looking at stressors related to teaching. For the purpose of this study three sources of stressors will be considered, classroom, building and community. The following parameters apply:

> Classroom Stressors: Stress which is directly related to your classroom structure/function and/or your relationship with your students.
>
> Building Stressors: Stress which is directly related to issues beyond your classroom but is associated with the building structure/management.
>
> Community Stressors: Stress which is directly related to issues generated by individuals who are not part of the Berrien Springs Public Schools team.

Check only one stressor source for each item. If you find that you do not understand a stressor as it is stated, feel free to suggest a rephrasing of the item. If you cannot identify a single source of a stressor item, leave the squares blank. If you do not feel it is a stress issue, please place an NA in the margin beside the stressor.

Stressors	Source of Stressor		
	Classroom	Building	Community
Individual's zealous involvement in narrow aspects of school programs			
Non school personnel's lack of understanding of current educational issues			
Work ethic variations among staff members			
Student submitting another student's work for credit			
Lack of school board leadership			
Space restrictions affecting creative teaching			
Imposed teaching schedules			
Multiple role expectations			
Student lack of respect for adults			
Poor physical plant			
Student failure to comply with directions			
Public airing of concerns about teaching			
Perception that teaching is shallow and mindless work			
Distortion of facts or failure to talk to the source when there is a concern			
Student unconcern with personal academic success			
Negative perception about teachers			
Inter-departmental disagreements			
Lack of adequate planning time with peers			
Student's failure to attend to the teacher			
Failure of staff members to share responsibilities			
Poor support for routine matters			
Lack of communication with regard to student activities			

Stressors	Source of Stressor		
	Classroom	Building	Community
Limits on individual help due to class size			
Excessive classroom interruptions			
Sense of competitiveness between staff members			
Student disrespect			
Parental failure of respect for their children			
Amount of paperwork for the school district			
Teacher isolation from peers			
Lack of firm discipline			
Staff interpersonal issues			
Lack of parental support regarding student placement			
Student lack of basic skills			
Negative perception of schools			
General lack of parental support			
Student irresponsibility			
Lack of parental support regarding student discipline			
Student lack of respect for their surroundings			
Disruptive students			
Lack of faith in teachers			
Negative messages in the media			
Lack of staff consistency regarding school rules			
Unmotivated students			
Belief that children must be naturally talented to be successful			
Student lack of respect for school property			
Administrative gender bias			
Lack of communication with teacher when there is a problem			

Stressors	Source of Stressor		
	Classroom	Building	Community
Lack of staff cooperation and support			
Teaching load			
Less than adequate supplies			
Old equipment			
Student hyperactivity			
Student squabbles			
Lack of planning time with other grade/building teachers			
Lack of administrative leadership			
Safety restrictions affecting creative teaching			
Chronic student discipline issues			
Multi-cultural issues			
Negative attitudes about teachers			
Wide range of student abilities			
Communication with home – written and phone contacts			
Micro management by School Board			
Amount of paper work for individual students-- absences			
Inconsistent grading system			
Classroom interruptions			
Need for age appropriate classroom-size			
Lack of support for issues relating to student behavior			
Over reaction to school related issues			
Parent blame of teacher for lack of children's success			
Inconsistent discipline			
Lack of parental involvement in their child's education			
Time restrictions			

Stressors	Source of Stressor		
	Classroom	Building	Community
Student lack of respect for their other students			
Number of special needs students			
Workload inequities			
Effect of an increased number of short-term students			
Parent vs. teacher attitude			
Student aggression			
Relationship with administration			
Inadequate library supplies			
Lack of peer support			
Amount of paper work			
Lack of parental support			
Disruptive student behavior			
Belief that good education should be cheap			
Special interest groups			
Uninformed public			
Added responsibilities beyond teaching			
Student lack of respect for teachers			
Student lack of respect			
Belief that teaching is easy			
Lack of support for teachers			
Student lack of initiative			
Lack of training for updating curriculum			
Student rudeness			
Discipline issues			
Fund raising projects			
Lack of sound student furniture			
Unclear school rules			

Stressors	Source of Stressor		
	Classroom	Building	Community
Lack of parental guidance			
Child's family background			
Perception that teachers work 6 hours/day, 9 months/year			
Financial restrictions			
Lack of pride in school work			
Inadequate supplies for projects			
Student insubordination			
High risk students			
Perception that teachers are not professionals			
Differing educational philosophies			
Class size			
Student behavior			
Excessive paperwork			
Noisy classrooms			
Accountability for short-term student's academic success			
Effect of disruptive homes on the educational process			
Student cheating			
Inadequate space for class projects			
Lack of support for issues relating to student performance			
Failure of staff members to support school rules			
Inadequate storage space			
Noisy halls			
Size of classroom			
Need for more in-service time			
Apathetic students			

Stressors	Source of Stressor		
	Classroom	Building	Community
Student defiance of authority			
Noisy environment			
Student low achievement when they have the ability			
Amount of paperwork for the State			
Student blaming of teacher for lack of success			
Number of papers to correct			
Uncomfortable environment–classroom temperature			
Number of meetings			
Lack of time for interaction with other teachers			
Excessive paperwork needed for requests			
Belief that teachers are overpaid			
Immature parents			
Political structure of school boards			
Parental failure to honor family responsibilities			

APPENDIX E
STRESSOR SOURCE CHECK LIST

Stressor Source Check List

Each of the following 39 items indicate a factor which is a potential source of stress for the classroom teacher. For each item please circle a number in the range from 1 (No Stress) through 5 (Severe Stress) to indicate the amount of stress you experience when you encounter the issue. Assume 2, 3, and 4 are equally spread between 'No Stress ' and 'Severe Stress'. Please respond to every item.

	No Stress				Severe Stress
Staff interpersonal issues	1	2	3	4	5
Non school personnel lack of understanding of current educational issues	1	2	3	4	5
High risk students	1	2	3	4	5
Uninformed public	1	2	3	4	5
Number of meetings	1	2	3	4	5
Student lack of basic skills	1	2	3	4	5
Failure of staff members to share responsibilities	1	2	3	4	5
Unmotivated students	1	2	3	4	5
Public perception that teachers work only 6 hours/day, 9 months/year	1	2	3	4	5
Negative perceptions about teachers	1	2	3	4	5
Differing educational philosophies	1	2	3	4	5
Workload inequities	1	2	3	4	5
Special interest groups	1	2	3	4	5
Disruptive student behavior	1	2	3	4	5
Student failure to comply with directions	1	2	3	4	5
General lack of parental support	1	2	3	4	5
Work ethic variations among staff members	1	2	3	4	5
Public perception that teaching is shallow and mindless work	1	2	3	4	5

CONTINUE ON BACK OF PAGE

	No Stress				Severe Stress
Lack of communication with regard to student activities	1	2	3	4	5
Belief that good education should be cheap	1	2	3	4	5
Noisy classrooms	1	2	3	4	5
Lack of staff consistency regarding school rules	1	2	3	4	5
Sense of competitiveness between staff members	1	2	3	4	5
Amount of paper work for the school district	1	2	3	4	5
Need for more in-service time	1	2	3	4	5
Perception that teachers are not professionals	1	2	3	4	5
Lack of recognition of the school's contribution to society	1	2	3	4	5
Lack of staff cooperation and support	1	2	3	4	5
Student cheating	1	2	3	4	5
Teacher isolation from peers	1	2	3	4	5
Student low achievement when they have the ability	1	2	3	4	5
Public airing of concerns about teaching	1	2	3	4	5
Belief that teachers are overpaid	1	2	3	4	5
Amount of paper work	1	2	3	4	5
Student hyperactivity	1	2	3	4	5
Student squabbles	1	2	3	4	5
Students' failure to attend to the teacher	1	2	3	4	5
Negative perception of schools	1	2	3	4	5
Student lack of pride in school work	1	2	3	4	5

APPENDIX F

LETTERS

October 10, 1997

Dear BSPS Teacher:

As some of you may know, I am working toward a doctorate in Educational Psychology at Andrews University. The focus of my research is to study the stress levels and sources of stress affecting regular education teachers in schools with populations of less than 2500. While the subject of teaching and stress has been researched, few studies have looked specifically at teachers employed in small school systems. My research addresses the issue of teacher stress in the range from manageable to burnout, the sources of teacher stress, and implementation of coping strategies. Currently I am working on the development of a stressor source measurement scale.

From data previously gathered from teacher's input a list of 144 stress topics has been developed. The next step requires a panel of judges to identify the category of each stress topic – classroom, building, or community. Judges are asked to read each stress topic and check the appropriate box. The task will take approximately 30 to 45 minutes to complete.

As always, this is a busy time of the year. I need 10 judges from elementary, middle school and high school settings for this stage of scale development and I would greatly appreciate your input as a judge. No identification is needed for the check lists. Your responses will be pooled with those of the other judges and those items with an 80% or greater agreement will be considered for the final measurement scale. When you complete the judging, you may return the check list to me through the internal mail system, or call me and I will pick it up. If you have any questions you can reach me at the high school office or at home, 471-7810.

Thank you for your help with this project.

Sincerely,

Roberta Farwell

Date

FIELD(name)
FIELD(school)
FIELD(address)
FIELD(p.o.box)
FIELD(city)

Dear FIELD(greeting):

I am a graduate student at Andrews University working on a doctorate in Educational Psychology. The focus of my research is the study of stress levels and sources of stress affecting regular education teachers in schools with populations with fewer than 2500 students. While the subject of teaching and stress has been researched, few studies have looked specifically at teachers employed in small school systems. My research addresses the issue of teacher stress through a range of manageable to burnout, the sources of teacher stress, and the self-initiated implementation of coping strategies.

I am writing to ask you for your assistance. For this study I need the names of kindergarten through high school teachers assigned to regular education classrooms. Each teacher contacted will receive a packet containing a letter explaining the study, a demographic information sheet (age, marital status, parenting status, years of experience, and teaching assignment)and copies of a stress inventory and a stressor source check list. Teacher responses will be anonymous. The results of the research will be made available only to those returning a self-addressed stamped envelope with their responses. Research results will not be identified by school.

I hope you will be able to provide list of names of regular education staff members for this research project. If you have questions about the research you can contact me during the day at Berrien Springs High School, (616) 471-1748, and I will be happy to speak with you. If you would prefer to speak with my advisor, Dr. Frederick Kosinski, he may be reached at the Education Department of Andrews University, (616) 471-3466. Lists can be mailed to me at the address below or sent via FAX at (616) 471-1511.

I am looking forward hearing from you.

Sincerely,

Roberta Farwell
1771 E. Hinchman Road
Berrien Springs, MI 49103-9743

APPENDIX G

DESCRIPTIVE STATISTICS FOR SUBSCALES

Descriptive Statistics for Subscales

Subscale	Means	Standard Deviation	Possible Range	Actual Range	Coeff. Alpha Reliability
Maslach Burnout Inventory					
Emotional Exhaustion	23.93	10.75	0-54	0-50	0.8937
Depersonalization	7.42	5.51	0-30	0-27	0.7064
Personal Accomplishment	38.20	6.70	0-48	16-48	0.8108
Stressor Source Check List					
Classroom	29.55	9.02	0-52	3-51	0.8871
Building	20.06	9.20	0-52	0-42	0.8616
Community	22.68	11.45	0-52	0-52	0.9306

REFERENCE LIST

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Alschuler, A.S. (1980). Causes, consequences, and cures: A summary. In A. S. Alschuler (Ed.), Teacher burnout (pp. 6-14). Washington, DC: National Education Association.

Anderson, M. B. G., & Iwanicki, E. F. (1984). Teacher motivation and its relationship to burnout. Educational Administration Quarterly, 20, 109-132.

Blase, J.J., Dedrick, C., & Strathe, M. (1986). Leadership behavior of school principals in relation to teacher stress, satisfaction, and performance. Journal of Humanistic Education and Development, 24, 159-171.

Bloch, A. M. (1977). The battered teacher. Today's Education, 66, 58-62.

Brissie, J.S., Hoover-Dempsey, K.V., & Bassler, O.C. (1988). Individual situational contributors to teacher burnout. Journal of Educational Research, 82, 106-112.

Byrne, B.M. (1991). The Maslach Burnout Inventory: Validating factorial structure and invariance across intermediate, secondary and university educators. Multivariate Behavioral Research, 26, 583-605.

Chapman, D. W., & Lowther, M.A. (1982). Teachers' satisfaction with teaching. Journal of Educational Research, 75, 241-247.

Cherniss, C. (1980). Staff burnout: Job stress in the human services. Beverly Hills, CA: Sage Publications.

Cohen, J. (1969). Statistic power analysis for the behavioral sciences. New York: Academic Press.

Dworkin, A.G. (1987). Teacher burnout in the public schools: Structural causes and consequences for children. Albany, NY: State University of New York Press.

Farber, B.A. (1983). Introduction: A critical perspective on burnout. In B.A. Farber (Ed.), Stress and burnout in the human services professions (pp. 1-20). New York: Pergamon Press.

Farber, B.A. (1984). Stress and burnout in suburban teachers. Journal of Educational Research, 77, 325-331.

Farber, B. A., & Miller, J. (1981). Teacher burnout: A psychoeducational perspective. Teacher College Record, 83, 235-243.

Feitler, F. C., & Tokar, E. (1982). Getting a handle on teacher stress: How bad is the problem? Educational Leadership, 40, 456-458.

Freudenberger, H. J. (1974). Staff burnout. Journal of Social Issues, 1, 159-164.

Freudenberger, H. J., & Richelson, G. (1980). Burn-out: The high cost of high achievement. Garden City, NY: Anchor Press.

Friedman, I. A. (1991). High- and low-burnout schools: School culture aspects of teacher burnout. Journal of Educational Research, 84, 325-333.

Friedman, I. A., & Farber, B. A. (1992). Professional self-concept as a predictor of teacher burnout. Journal of Educational Research, 86, 28-35.

Glasser, W. (1980). Six steps to a positive addiction. In A. S. Alschuler (Ed.), Teacher burnout (pp. 55-68). Washington, DC: National Education Association.

Gold, Y. (1985). The relationship of six personal and life history variables to standing on three dimensions of the Maslach Burnout Inventory on a sample of elementary and junior high school teachers. Educational and Psychological Measurement, 45, 377-387.

Greenglass, E.R., & Burke, R.J. (1988). Work and family precursors of burnout in teachers: Sex differences. Sex Roles, 18, 215-229.

Jackson, S.E., Schwab, R.L., & Schuler, R.S. (1986). Towards an understanding of the burnout phenomena. Journal of Applied Psychology, 71, 630-640.

Kendall, M. (1975). Multivariate analysis. New York: Hafner Press.

Kreis, K., & Brockopp, D.Y. (1986). Autonomy: A component of teacher job satisfaction. Education, 107, 110-115.

Kyriacou, C., & Sutcliffe, J. (1979). Teacher stress and satisfaction. Educational Research, 21, 89-96.

Lowther, M.A., Chapman, D. W., & Stark, J. S. (1984). Perceptions of work-related conditions among teachers and persons in other occupations. Journal of Educational Research, 77, 277-282.

Lowther, M. A., Gill, S. J., & Coppard, L. C. (1985). Age and the determinants of teacher job satisfaction. The Gerontologist, 25, 520-525.

Maeroff, G. I. (1988). The empowerment of teachers: Overcoming the crisis of confidence. New York: Teachers College Press.

Malanowski, J., & Wood, P. (1984). Burnout and self-actualization in public school teachers. Journal of Psychology, 117, 23-26.

Malik, J. L., Mueller, R. O., & Meinke, D. L. (1991). The effects of teaching experience and grade level taught on teacher stress: A lisrel analysis. Teaching & Teacher Education, 7, 57-62.

Maslach, C. (1976). Burned-out. Human Behavior, 5, 16-22.

Maslach, C. (1982a). Burnout: The cost of caring. Englewood Cliffs, NJ: Prentice-Hall.

Maslach, C. (1982b). Understanding burnout: Definitional Issues in analyzing a complex phenomenon. In W. S. Paine (Ed.) Job stress and burnout: Research, theory and intervention perspectives (pp. 29-40). Beverly Hills, CA: Sage Publications.

Maslach, C., & Jackson, S. E. (1981). Measurement of experienced burnout. Journal of Occupational Behavior, 2, 99-113.

Maslach, C., & Jackson, S. E. (1985). The role of sex and family variables in burnout. Sex Roles, 12, 837-851.

Maslach, C., & Jackson, S. E. (1986). Maslach Burnout Inventory (2nd ed.). Palo Alto, CA: Consulting Psychologists Press.

Maslach, C. & Pines, A. (1977). The burn-out syndrome in the day care setting. Child Care Quarterly, 6, 100-113.

Mattingly, M. A. (1977). Sources of stress and burn-out in professional child care work. Child Care Quarterly, 6, 127-137.

Mazur, P.J., & Lynch, M.D. (1989). Differential impact of administrative, organizational, and personality factors of teacher burnout. Teaching and Teacher Education, 5, 337-353.

Needle, R. H., Griffin, T., Svendsen, R., & Berney, C. (1980). Teacher stress: Sources and consequences. The Journal of School Health, 50, 96-99.

Pines, A. (1983). On burnout and the buffering effects of social support. In B.A. Farber (Ed.), Stress and burnout in the human service professions (pp. 155-174). New York: Pergamon Press.

Pines, A., & Aronson, E. (1989). Career burnout: Causes and cures. New York: The Free Press.

Pines, A., Aronson, E., & Kafry, D. (1981). Burnout: From tedium to personal growth. New York: The Free Press.

Pines, A., & Kafry, D. (1982). Coping with burnout. In J.W. Jones (Ed.), The burnout syndrome: Current research, theory, interventions (pp. 139-150). Park Ridge, IL: London House Press.

Raschke, D.B., Dedrick, C.V., Strathe, M.I., & Hawkes, R.R. (1985). The elementary teachers's perspective. Elementary School Journal, 85, 559-564.

Ray, E.B. (1991). The relationship among communication network roles, job stress, and burnout in educational organizations. Communication Quarterly, 39, 91-102.

Russell, D.W., Altmaier, E., & VanVelzen, D. (1987). Job-related stress, social support, and burnout among classroom teachers. Journal of Applied Psychology, 72, 269-274.

Sakharov, M., & Farber, B. A. (1983). A critical study of burnout in teachers. In B.A. Farber (Ed.), Stress and burnout in the human service professions (pp. 65-81). New York: Pergamon Press.

Schonfeld, I.S. (1990). Coping with job-related stress: The case of teachers. Journal of Occupational Psychology, 63, 141-149.

Schwab, R.L., & Iwanicki, E.F. (1982). Who are our burned out teachers? Educational Research Quarterly, 7, 5-16.

Schwab, R.L., Jackson, S.E., & Schuler, R.S. (1986). Educator burnout: Sources and consequences. Educational Research Quarterly, 10, 14-30.

Selye, H. (1978). The stress of life. New York: McGraw-Hill.

Wright, R.E., & Manera, E.S. (1985). Rural educators identify job stressors. Rural Educators, 6, 20-24.

VITA

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WORK EXPERIENCE

1983-present	Berrien Springs High School; Administrative Assistant, Guidance
1972-1983	Berrien Springs Middle School; Teacher (grades 6-8)
1966-1967	Dow Pharmaceutical Company, Zionsville, Indiana; Medical Technologist
1963-1966	Michigan State University, Microbiology: Medical Technologist
1961-1963	Borgess Hospital, Kalamazoo, Michigan; Medical Technologist
1959-1961	Mercy Hospital, Benton Harbor, Michigan; Medical Technologist

EDUCATION

1999	Andrews University Berrien Springs, Michigan	PhD in Educational Psychology
1979	Western Michigan University Kalamazoo, Michigan	MA in Counseling and Personnel
1975	Western Michigan University Kalamazoo, Michigan	MA in Elementary Education
1972	Western Michigan University Kalamazoo, Michigan	BS in Elementary Education, Math, Science and Group
1959	Mercy Hospital School of Medical Technology Benton Harbor, Michigan	Registration--American Society of Clinical Pathology
1958	Benton Harbor Community College & Technical Institute Benton Harbor, Michigan	Associate of Science

CERTIFICATIONS

Teaching Certificate - State of Michigan

Continuing Certification with MA - State of Michigan

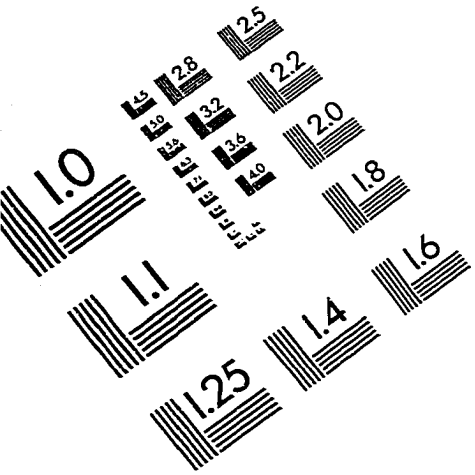
LICENSE

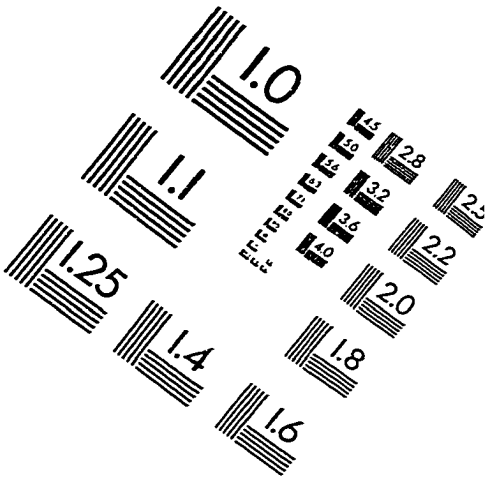
Professional Counselor License - State of Michigan

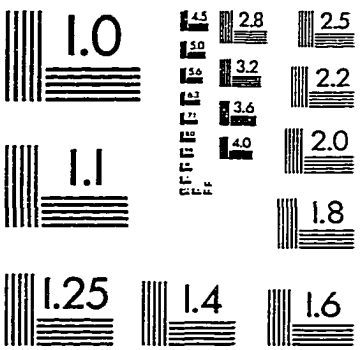
REGISTRY

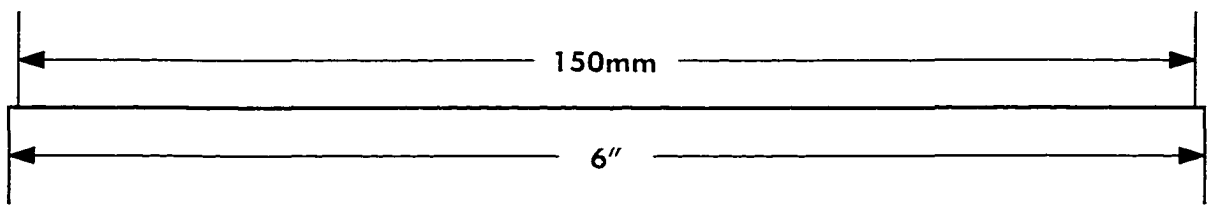
American Society of Clinical Pathologists; Medical Technologist - National Registry

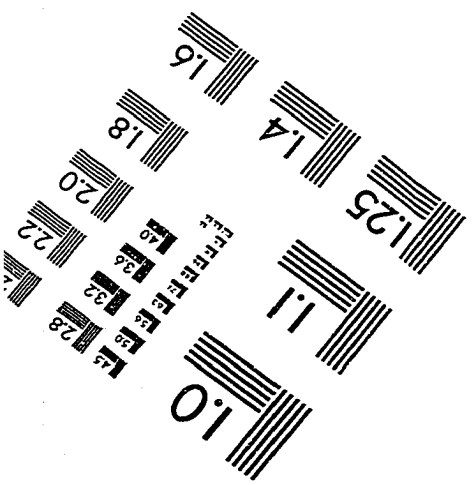
IMAGE EVALUATION TEST TARGET (QA-3)

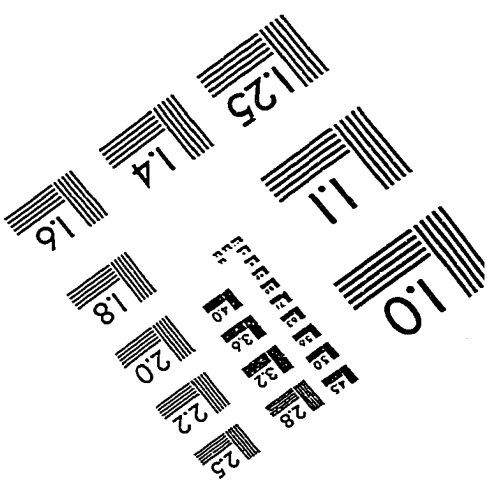












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